FW3150 User's Manual

Part 1

(Product Overview)

Version 3.0

www.intplus.es

www.flexwatch.es

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URL : http://www.flexwatch.com

Warning

To prevent risk of electric shock, do not remove the system-case. Any repair or modifications for the product will be allowed by qualified service personals only. Do not expose this appliance to water or moisture. Do not install this product in hazardous areas where highly combustible or explosive products are stored or used.

Important Information

• Before installation, please read and observe all instructions and warnings contained in this manual. Retain this manual with the original receipt for future reference and warranty.

• If any items are missing from the package when you open the box, Please DO NOT install or OPERATE the FlexWATCH® server. Contact the local Dealer or Distributor.

• Please record the following information for technical support and the track record in case of any theft or loss. Serial Number can be found on the underside of FlexWATCH® server.

Warranty

- 2 year Limited.
- Product : Network Video Recorder
- Model Name : FW-5450
- Serial Number : _00-30-6F- - -_

- Purchase Date : _____ (yy/mm/dd)

1. Product Overview

1.1. FW-3150

FW-3150 server is 1ch Network Video Server, which transmits digital images captured by Analog CCD camera over the Internet. So users can view real-time live images over the Internet at anytime and anywhere using the standard web browser such as MS Internet Explorer or Netscape Communicator. There is no need other specific software to view real-time live images over the Internet. FW-3150 server is state-of-the art device and leads new generation of monitoring and security solution.

Picture 1 : FW-3150

1.2. Key Functions of FW-3150

- Standalone device built-in web server
- Max 30 fps transmission speed on TCP/IP network
- 10M/100M Auto Sensing Ethernet
- Effective Bandwidth & Bit-rate Control by MPEG4
- Built-in 2 way Audio transmission (1ch A-in, 1 A-out)
- Supports Dynamic IP users by AOIP server
- Supports Sensor Input, Digital Output
- Supports Transparent mode
- Encryption function by user authentication
- Image transmission function via FTP, Email
- Supports Various PTZ (Pan/Tilt/Zoom) Devices
- 1CH V-out for displaying on analog monitor

1.3. Technical Specification of FW-3150

Model Name	FW-3150
Hardware	32bit Embedded CPU Flash 8Mbytes /SDRAM: 32Mbytes Linux version 2.4.21 operating system Battery backed up real-time clock
Video compression	Motion JPEG MPEG-4
Resolution	NTSC: 704x480,704x240,352x240,176x112 PAL: 704x576,704x288,352x288,176x144
Frame rate (each channel)	Motion JPEG: Up to 30/25 fps at D1 (Secondary Stream at QCIF) MPEG-4: Up to 30/25 fps at D1 (Secondary Stream at QCIF)
Video Streaming	Motion JPEG and MPEG-4 Dual Streaming (Simultaneously) Controllable frame rate and bandwidth
Image setting	Compression levels: 6 (Motion JPEG) / 6 (MPEG-4) Color: color, black & white
Voice	APCM 4bit IMA Sampling rates 8KHz Audio 1ch in & 1ch out
LAN interface	10/100BaseT Ethernet auto sensing
Alarm I/O Interface	1 Photo-coupled inputs and 1 Relay output
Video Input	1 Channel Composite Video Input
Video Output	1 loop through analog video outputs
Serial Interface	Two serial ports for console, modem(PSTN & GSM), serial input/output device, PTZ COM Port is RS-232, AUX port can be configured as RS-232, RS-485 Max Baudrate: 115200 bit/s
Security features	Multi user level protection for camera access, PTZ, Alarm I/O
Advanced Service	Up to 2.2M memory for Pre/Post alarm buffer e-mail, FTP, alarm Buffer by event or schedule IP notification, Alarm Notification to e-mail, CGI Call by event or schedule
Built-in Motion detections	Accuracy: 12x12=144 blocks Motion Sensitivity : -100 ~ 100 : 100 is hypersensitive
PTZ & UART Control Support	PTZ and UART device control through serial interface Up to 35 PTZ protocols from Pelco " P" & " D" protocol, Vicon V1311RB, Samsung, Honeywell and Etc,.X10 device control Dial in/out via PSTN or GSM modem
Others	Transmit Serial input data transfer with Video IP notification by e-mail
Management	Configurable by serial, web or telnet Remote system update via telnet, FTP OR web browser.
Developer support	Provides HTTP CGI API ActiveX control development kit
PWR Supply	SMPS input: 100~240VAC, 300mA Output: DC 12 Volt, 800mA

PWR Consumption	DC 12Volt 500 mA
Operating Environment	Temperature: 41° ~ 122°F (5° ~ 50°C) Humidity: 20 ~ 80% RH(non-condensing)
Accessories	Console cable for system set up Test LAN cable CD for User Guide, Installation wizard Quick Installation guide
Miscellaneous	Freely downloadable NDVR Software AVI conversion tool support by FW-voyager. Work with FW-Manager(NDVR S/W) Dynamic IP support through AOIP
Users	32 simultaneous users
Installation, management and maintenanc	Installation CD and web-based configuration Firmware upgrades over HTTP or FTP , firmware available at www.flexwatch.com
Video access from Web browser	Video access from Web browser
Minimum Web browsing requirements	Pentium III CPU 500 MHz or higher Windows XP, 2000, NT4.0*, Internet Explorer 6.x or later
System integration support	Powerful API for software integration available at http://www.flexwatch.com, including Simple Viewer API, FlexWATCH Control SDK, event trigger data in video stream, embedded scripting and access to serial port peripherals over HTTP/TCP User can be installed user program daemon for event notification or sending image. Embedded operating system: Linux 2.4
Supported protocols	HTTP, TCP/IP, FTP, Telnet, RARP, PPP, PAP, CHAP, DHCP, SMTP client(e- mail), NTP, Java
Applications	FlexWATCH Manager 16/32/128/256 (not included)
Approvals	FCC : Class A CE : Class A
Dimensions (HxWxD) and weight	Size :122 mm(L) x 84 mm(W)X 35 mm(H) 4.8 "(L) x 3.3 "(W)X 1.37"(H) Weight : 310 g (0.68 lbs) without power supply.

Table 1 : FW-3150 Specification

1.4. FW-3150 Packing List

FW-3150's packing box includes the following items.

FW-3150	1ea	
Power Supply Unit (Power Cable & SMPS DC12V 0.8A Adapter)	1ea	
Direct Cable	1ea	
CD (User's Manual, installation wizard and Pictures)	1ea	

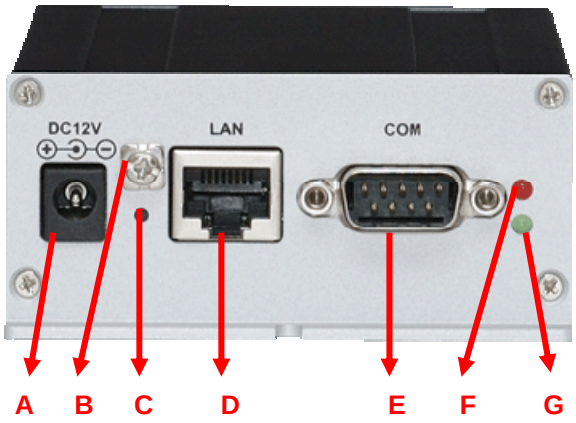
Table 2 : FW-3150 Packing List

☞ *Please check all the listed items are included in your package. For any missing items, please contact your local distributor.*

2. Hardware Description

2.1. FW-3150 Front Panel View

Picture 2 : FW-3150 Front Panel

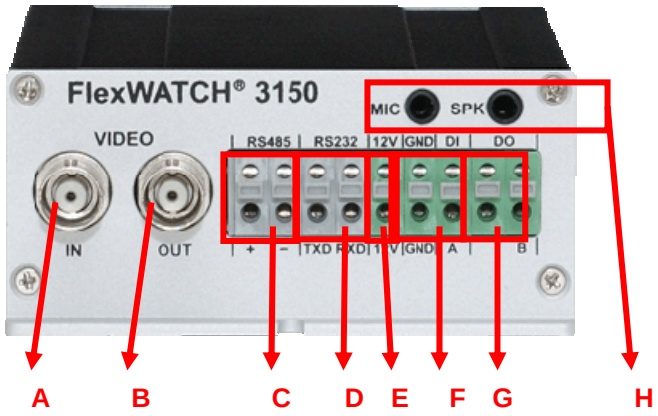


	Name	Description
A	Power	Power input ports for DC 12V 0.8A [SMPS]. Use the original power supply unit from the package.
B	Grounding Connector	Grounding Connector
C	Factory Default Button	This button can reset the factory default settings at the system. especially when a user lost his/her admin-password, or when it got any uncertain faulty operation. - After reboot the system, wait until hearing two times of beep sound. - Keep pressing FD button for 5~10 seconds until hearing three times short beep sound. ACT LED blinks during the process. The system will reboot automatically when it's completed.
D	LAN	LAN Port for 10/100M Base T Auto sensing.
E	COM	RS-232 ports for Serial input device, Modem or Console (Hyperterminal.connection).
F	POWER LED	Red light blinks when power is provided.
G	LAN(Tx/Rx) LED	Green light blinks when there is data transmission on the connected LAN.

Table 3 : FW-3150 Front Panel Description

2.2. FW-3150 Rear Panel View

Picture 3 : FW-3150 Rear Panel View



	Name	Description
A	Video In	BNC cable port for 1ch Video input.
B	Video Out	1ch Video Outport port displaying on Analog Monitor
C	RS485	RS-485 Ports for PTZ
D	AUX RS-232	RS-232 Ports for PTZ, UART-Out/In.
E	DC 12V Output	12V power relay ports for any external device connection. It must not exceed 0.5A.
F	DI (SENSOR)	Signal input ports for sensor and contact.
G	DO (ALARM)	Signal output ports for alarm and light.
H	MIC, SPK	1ch Audio Output and Input

Table 4 : FW-3150 Rear panel Description

3. FW-3150 HW installation and basic setup

3.1. Before installation,

- Read carefully User's Manual
- Check-out if the power source is stable or not at the environment.

3.2. Factory Default Condition

The following tables shows the factory default condition. Please refer to this when you need to change the values on admin menu..

	Factory Default Condition
Admin ID	root
Admin password	root
IP address	10.20.30.40
Network mask	255.255.255.0
Gateway	10.20.30.1

Table 5 : Factory Default Condition

☞ *Factory default Admin ID and Password are all **lower case letters**. You can change the password with Capital letters.*

3.3. FW-3450 Hardware installation

Following steps show the phisical installation process for FW-3150.

1. Install CCTV cameras at each required position..
2. Connect BNC cable between CCTV cameras's V-out and FW-3150's V-in.
3. Connect a Lan cable at FW-3150 in your local network.
4. Connect the power cable at FW-3150.

After that, you need to follow the steps below.

- First, Network Configuration by FW-installer.
- Second, Camera Configuration by FW-installer or admin-menu.
- Third, Service Configuration by FW-installer or admin-menu.

☞ ***For IP setup**, refer to "Chapter 2.Network Configuration" on User's Manual Part2.*

User Manual

FlexWATCH Installer

Version 1.01_Rev1

www.intplus.es

www.flexwatch.es

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1. What is FlexWATCH Installer?

- FlexWATCH Installer is a useful tool to setup FlexWATCH's network, camera & recording condition; is also used for firmware updating.
- For more details of FlexWATCH features and applications, Users manual CD-ROM will help you. Also check, Seyeon Technologies web site for latest news and documents. (http://www.flexwatch.com)
- Basic networking skills, (Examples: IP address, LAN, HUB, Router and network devices), are required to using flexWATCH installer. Contact your network service provider or network administrator to obtain basic network information.
- FlexWATCH Installer is applicable to FlexWATCH linux series (*FlexWATCH 1110 / 1120 / 1130 / 1160 / 2140 / 2150 / 3110 / 3150 / 3440 / 3450 / 5000 / 5440 / 5450*) This manual is based on the general features, and may be different to each model.

2. How to install FlexWATCH Installer

2.1 Double Click **FlexWATCH Installer icon:** in the CD.

You can download it from our website, www.flexwatch.es

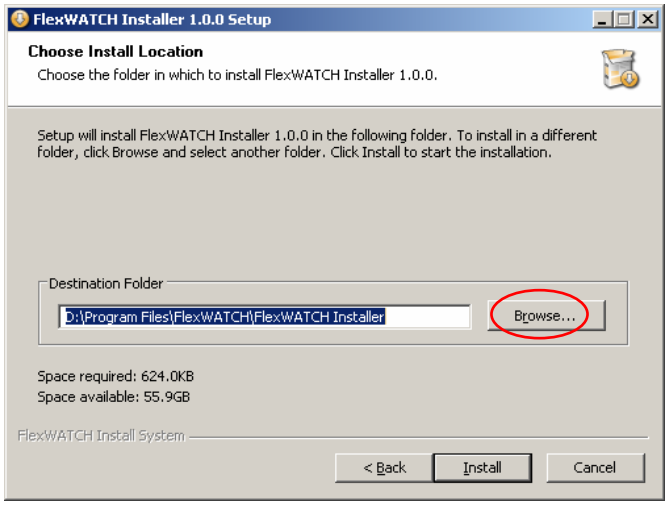
2.2 Click **Next**

On the welcome page, read the explanatory text and check version of FlexWATCH Installer, and click **Next**.

FlexWATCH Installer 1.0.0 Setup
Welcome to the FlexWATCH Installer 1.0.0 Setup Wizard
This wizard will guide you through the installation of FlexWATCH Installer 1.0.0.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

2.3 Locate the destination folder and click **Install.**

Default location of destination folder is “C:\Program Files\FlexWATCH\FlexWATCH Installer”. To install on a different location, click **Browse** and select your location and click **Install**.


FlexWATCH Installer 1.0.0 Setup
Choose Install Location
Choose the folder in which to install FlexWATCH Installer 1.0.0.
Setup will install FlexWATCH Installer 1.0.0 in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
D:\Program Files\FlexWATCH\FlexWATCH Installer
Browse...
Space required: 624.0KB
Space available: 55.9GB
FlexWATCH Install System
< Back
Install
Cancel

2.4 Click **Finish** (Complete installation)

After installation of the FlexWATCH Installer on your computer, click **Finish** to complete installation. To reinstall or remove/uninstall FlexWATCH Installer from your system, refer to next page.

FlexWATCH Installer 1.0.0 Setup
Completing the FlexWATCH Installer 1.0.0 Setup Wizard
FlexWATCH Installer 1.0.0 has been installed on your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

3. How to uninstall FlexWATCH Installer

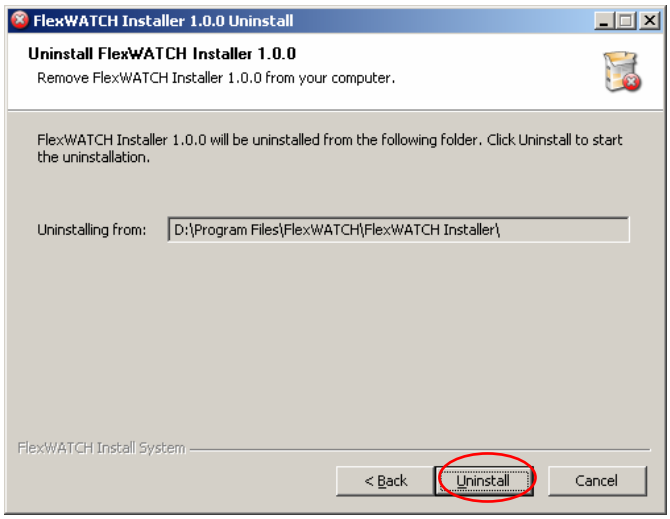
3.1 Remove **FlexWATCH Installer**

Click **Start**, Click **Programs**, Click **FlexWATCH**, Click **FlexWATCH Installer** and click **Uninstall**.

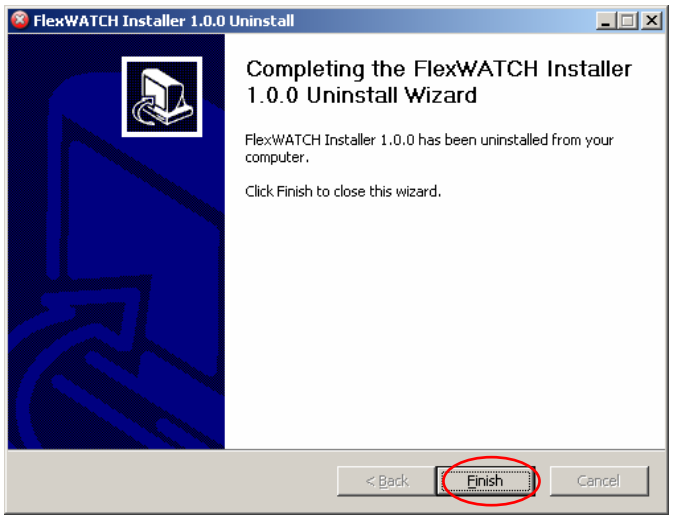
3.2 Click **Next**

FlexWATCH Installer 1.0.0 Uninstall
Welcome to the FlexWATCH Installer 1.0.0 Uninstall Wizard
This wizard will guide you through the uninstallation of FlexWATCH Installer 1.0.0.
Before starting the uninstallation, make sure FlexWATCH Installer 1.0.0 is not running.
Click Next to continue.
Next >
Cancel

3.3 Click **Uninstall**


FlexWATCH Installer 1.0.0 Uninstall
Uninstall FlexWATCH Installer 1.0.0
Remove FlexWATCH Installer 1.0.0 from your computer.
FlexWATCH Installer 1.0.0 will be uninstalled from the following folder. Click Uninstall to start the uninstallation.
Uninstalling from:
D:\Program Files\FlexWATCH\FlexWATCH Installer\
FlexWATCH Install System
< Back
Uninstall
Cancel

3.4 Click **Finish** (Complete Uninstall)

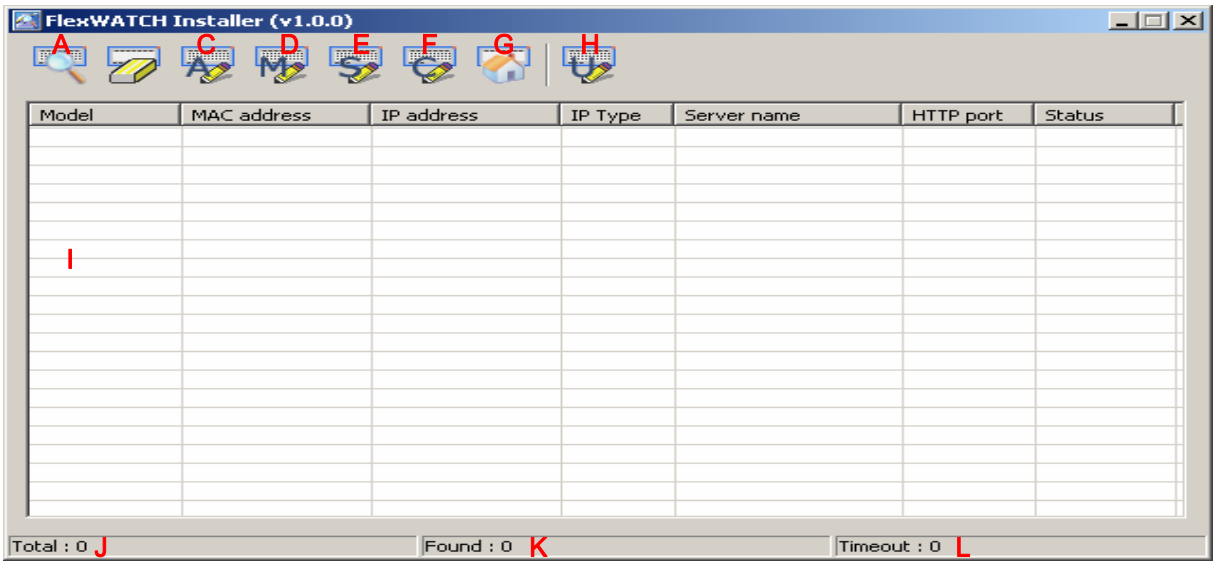

FlexWATCH Installer 1.0.0 Uninstall
Completing the FlexWATCH Installer 1.0.0 Uninstall Wizard
FlexWATCH Installer 1.0.0 has been uninstalled from your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

4. How to Run FlexWATCH Installer

4.1 Run **FlexWATCH Installer**

To run FlexWATCH Installer, double-click the shortcut of FlexWATCH Installer on your desktop, or go to Start, Program, FlexWATCH, and click on FlexWATCH Installer.

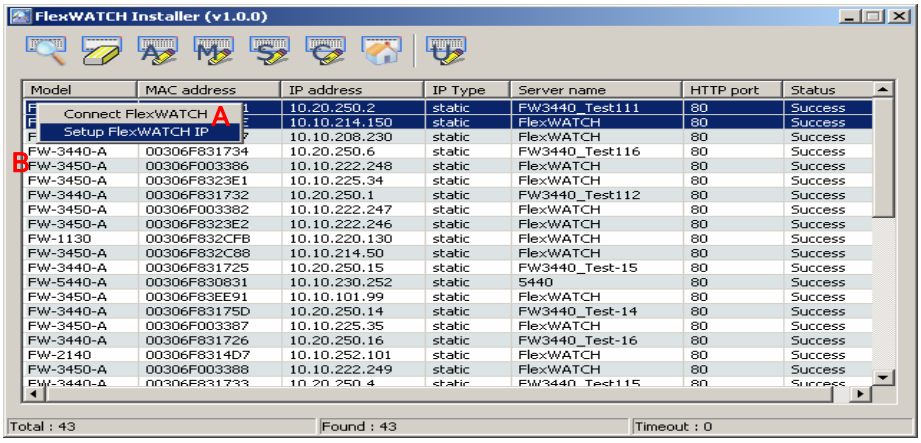
4.2 Program menu description.



Menu	Description
A. Search FlexWATCH	Shows the list of FlexWATCH Linux series products in the same LAN of your PC.
B. Clear FlexWATCH list	Clear all the listed FlexWATCH products.
C. Automatic IP setup	Setup FlexWATCH IP Network information automatically.
D. Manual IP setup	Setup IP Network information manually.
E. Server Setup	Setup basic operating condition
F. Camera Setup	Setup Camera & Recording Condition Setup
G. Connect FlexWATCH	Connect to the homepage of selected FlexWATCH ***Notice) Class of IP address should be the same between PC and FlexWATCH server.***
H. Update firmware	Update FlexWATCH's firmware.
I. Search List	Displays the list of searched FlexWATCH server(s).
J. Total	Shows the total number of searched FlexWATCH server(s).

K. Found	Shows the total number of searched FlexWATCH servers with normal response.
L. Timeout	Total number of devices with no response.

4.3 Setup Menu


FlexWATCH Installer (v1.0.0)
Model
MAC address
IP address
IP Type
Server name
HTTP port
Status
Connect FlexWATCH
A
Setup FlexWATCH IP
B
10.20.250.2 static FW3440_Test111 80 Success
10.10.214.150 static FlexWATCH 80 Success
10.10.208.230 static FlexWATCH 80 Success
FW-3440-A 00306F831734 10.20.250.6 static FW3440_Test116 80 Success
FW-3450-A 00306F003386 10.10.222.248 static FlexWATCH 80 Success
FW-3450-A 00306F8323E1 10.10.225.34 static FlexWATCH 80 Success
FW-3440-A 00306F831732 10.20.250.1 static FW3440_Test112 80 Success
FW-3450-A 00306F003382 10.10.222.247 static FlexWATCH 80 Success
FW-3450-A 00306F8323E2 10.10.222.246 static FlexWATCH 80 Success
FW-1130 00306F832CFB 10.10.220.130 static FlexWATCH 80 Success
FW-3450-A 00306F832C88 10.10.214.50 static FlexWATCH 80 Success
FW-3440-A 00306F831725 10.20.250.15 static FW3440_Test-15 80 Success
FW-5440-A 00306F830831 10.10.230.252 static 5440 80 Success
FW-3450-A 00306F83EE91 10.10.101.99 static FlexWATCH 80 Success
FW-3440-A 00306F83175D 10.20.250.14 static FW3440_Test-14 80 Success
FW-3450-A 00306F003387 10.10.225.35 static FlexWATCH 80 Success
FW-3440-A 00306F831726 10.20.250.16 static FW3440_Test-16 80 Success
FW-2140 00306F8314D7 10.10.252.101 static FlexWATCH 80 Success
FW-3450-A 00306F003388 10.10.222.249 static FlexWATCH 80 Success
Total : 43
Found : 43
Timeout : 0

- Right-click on IP address you wish to connect from search list.

Menu	Description
A. Connect FlexWATCH	Connects to the homepage of selected FlexWATCH
B. Setup FlexWATCH IP	Setup IP Network information.

TIP) For more information of IP set-up, refer to section 5. IP Setup in LAN.

5. IP Setup in LAN

There are three different ways of IP setup for the network connection of your FW server.

- **Static IP Assignment**

  General IP assignment method, to setup public or private static IP address.

- **IP Assignment by DHCP**

  IP assignment method, using DHCP to connect FlexWATCH by cable modem or VDSL.

- **IP Assignment by PPPoE**

  IP assignment method using PPPoE to connect FlexWATCH by xDSL

5.1 Static IP Assignment

A. Manual Setup

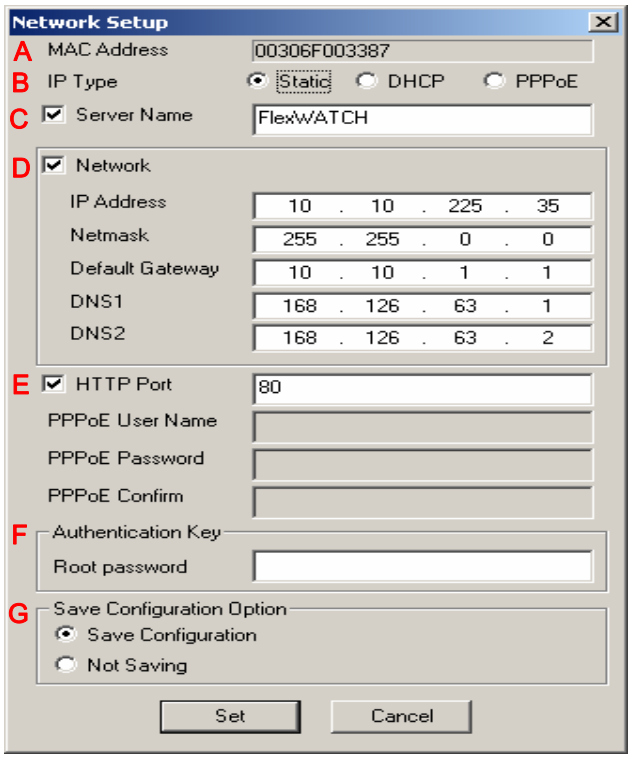
It's for when you are going to set a static IP, Public (WAN) or Private (LAN).

1) Connect your PC and FlexWATCH server as following diagram.

- If there is a HUB between your PC and FW server, use **the normal direct lan cables.**
- If your PC and FW server are directly connected to each other, use **a cross lan cable.**

2) Run FlexWATCH Installer, select FlexWatch server from the search list and right-click on the list to show pop-up menu, click **IP Setup** button.

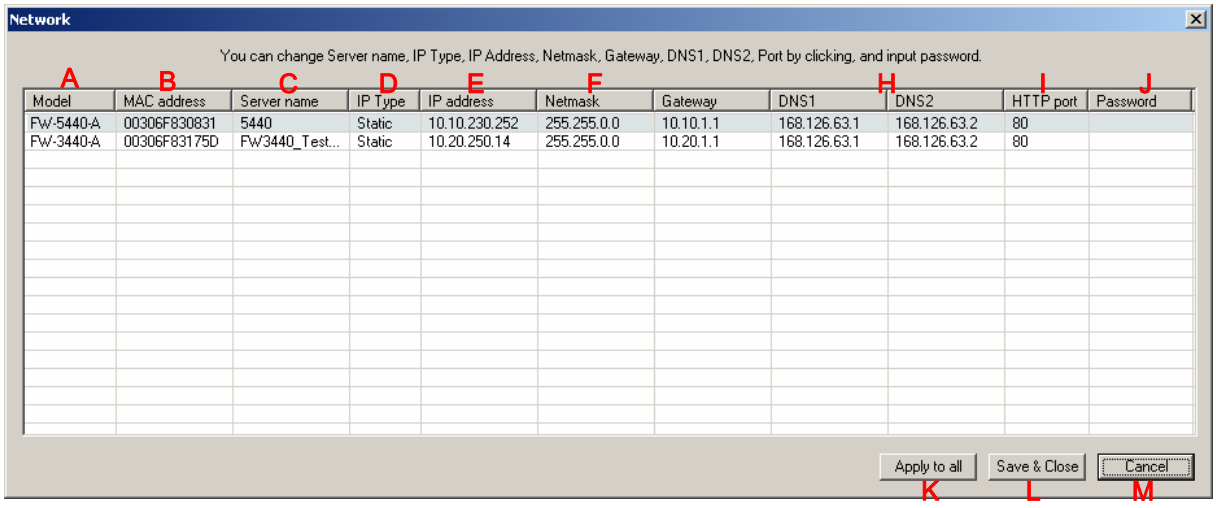
- If you select only 1 FlexWATCH server -



Menu	Description
A. MAC Address	Displays the Mac Address of the selected FlexWATCH server.
B. IP Type	Select 'Static'. (for static IP assignment).
C. Server Name	Type the name of your FlexWATCH server if you want to change the name.
D. Network	Specify the general network configuration.
IP Address	Type a proper IP Address to be assigned to your FlexWATCH server.
Netmask	A Net Mask is used to divide an IP address into subnets and specify the networks available hosts. Contact your network administrator for more information.
Default Gateway	Default gateway will be set automatically. (If not, type the given default gateway from your network administrator.)
DNS1, DNS2	Domain name service is an internet or other type of network server that helps identify domain names.
E. HTTP Port	Input the web port to access the homepage of FlexWATCH. (The default value is port 80)

F. Authentication Key	Password for authentication ID is root. The default is root.
G. Save Configuration Option	
Save Configuration	Save all the changed configurations to the flash memory.
Not Saving	Do not save any changes. ***Warning) If selecting no saving, reconfiguration will be needed if the server powers off or reboots.***

- Selecting more then 2 FlexWATCH servers -



Menu	Description
A. Model	Displays the model name of the selected FlexWATCH servers.
B. MAC address	Displays the Mac Address of the selected FlexWATCH servers.
C. Server name	Type the name of your FlexWATCH server if you want to change.

D. IP Type	Select 'Static'.
E. IP address	Type a proper IP Address to be assigned at your FlexWATCH server.
F. Netmask	A Net Mask is used to divide an IP address into subnets and specify the networks available hosts. Contact your network administrator for more information.
G. Gateway	Default gateway will be set automatically. (If not, type the given default gateway from your network administrator.)
H. DNS1, DNS2	Domain Name Service is an internet or other type of network server that helps to identify domain names.
I. HTTP port	Input the web port to access the homepage of FlexWATCH. (The default value is port 80)
J. Authentication Key	Password for authentication ID is root. The default is root.
K. Apply to all	After setting one item on the list, all the other listed items will have the same values you set. 'Server name' and 'IP address' will automatically have +1 value in order. ***Notice)*** *Many items can be easily set at once. It's useful when you are installing many items in a project site.*
L. Save & Close	To apply, save the changed configurations to flash memory and close the window.
M. Cancel	Close the window without saving the changes.

3) After IP configuration, click 'Connect' icon to access FlexWATCH. See live view of FlexWATCH or specify system configuration on admin menu. Refer to section '**10. How to see FlexWATCH's live view**' and '**User Manual for FlexWATCH**' for more details of system configuration and live view.

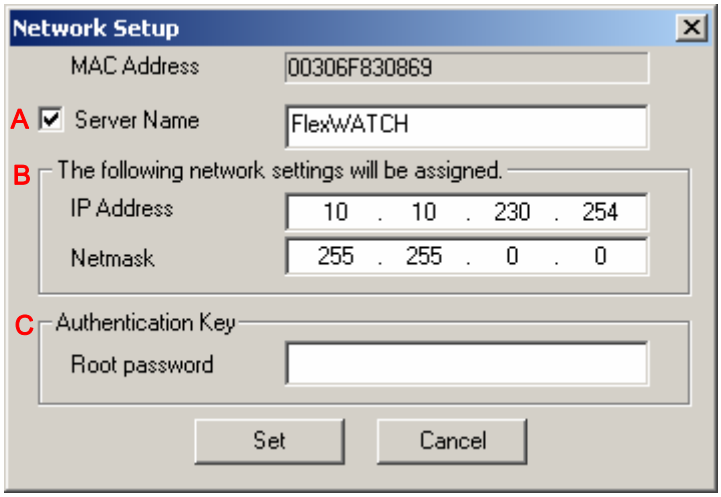
B. Auto Setup

FlexWATCH Installer can find and recommend you an IP address that is currently not being used in the same network of your PC. Users can apply the auto-recommended IP, or input another IP.

Warning) Any of the auto-recommended IP may cause a network collision and problem if it's already assigned to another device in the same network.

1) Connect your PC and FlexWATCH server in the network.

2) Run FlexWATCH Installer, select FlexWatch server from the search list and click 'Automatic IP Setup'.



Menu	Description
A. Server Name	Type the name of your FlexWATCH server if you want to change.
B. Network	
IP Address	Displays an IP address that is currently not being used in the same network of your PC. Users can apply the auto-recommended IP, or input another IP as you want.
Netmask	Displays the proper netmask value. Users can apply it, or input another value as you want.
C. Authentication Key	Password for authentication ID is root. The default is root.

5.2 IP Assignment by DHCP

DHCP method can be used for local area network environment with DHCP server.

Cable modem, VDSL and xDSL with auto-dial up for Internet connection can be used.

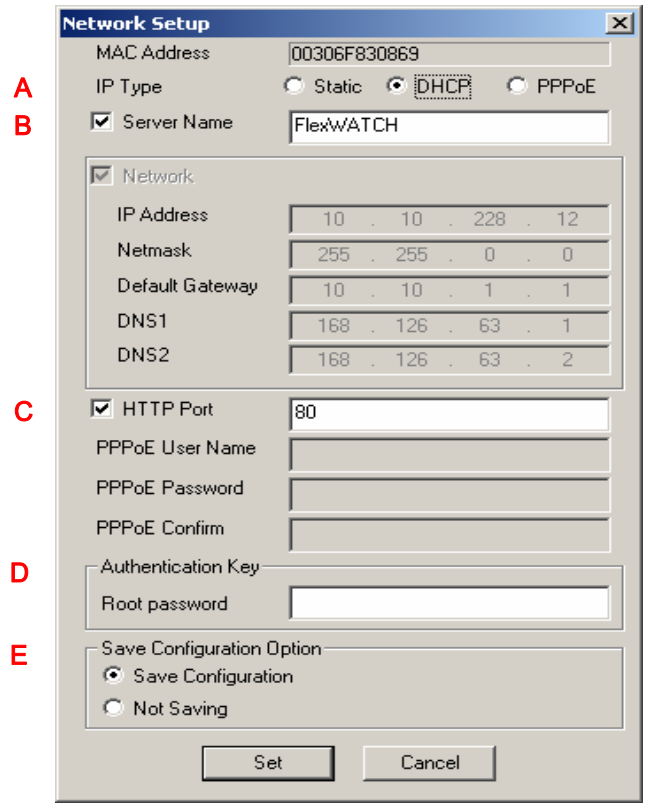
1) Connect your PC and FlexWATCH server in the network.

2) Setup a static IP address according to the steps in section '5.1 Static IP Assignment, Manual or Auto Setup'.

3) After IP Setup, check if you can access the homepage of FlexWATCH server by clicking the "Connect" icon.

Notice) If AOIP service is needed for remote access, make sure to setup AOIP function in the admin menu of your FlexWATCH server.

4) Run FlexWATCH Installer again, and select FlexWATCH on the search list, Click IP Setup and specify DHCP option.



Menu	Description
A. IP Type	Select 'DHCP'.

B. Server Name	Type the name of your FlexWATCH server if you want to change.
C. HTTP Port	Input the web port to access the homepage of FlexWATCH. The default value is port 80.
D. Authentication Key	Password for authentication ID is root. The default is root.
E. Save Configuration Option	
Save Configuration	Save all the changed configurations to Flash Memory.
Not Saving	Close the window without saving any changes. ***Warning) If selecting no saving, reconfiguration will be needed if the server powers off or reboots.***

5.3 IP Assignment by PPPoE

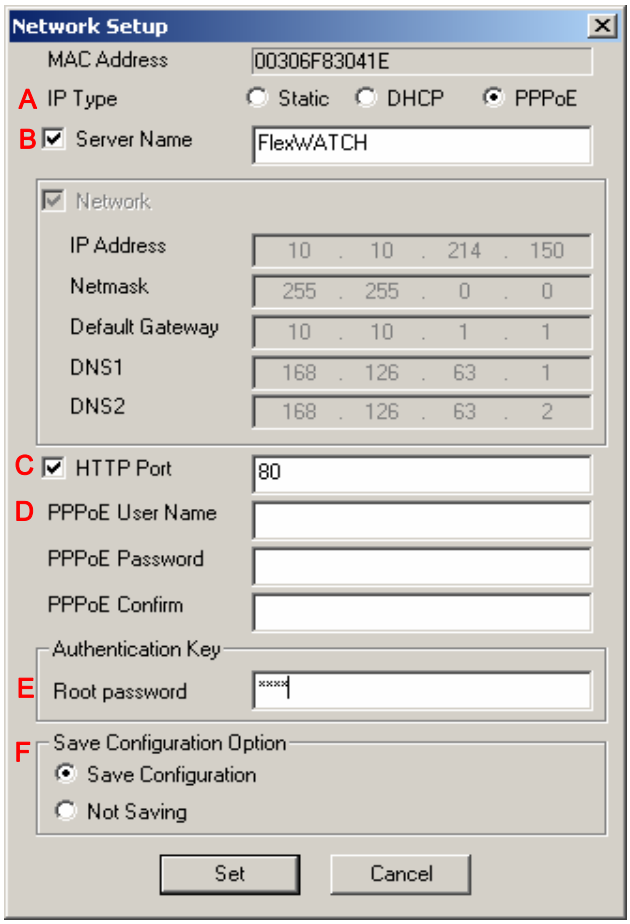
1) Connect your PC and FlexWATCH server in the network.

2) Setup a static IP address according to the steps in section '5.1 Static IP Assignment, Manual or Auto Setup'.

3) After IP Setup, check if you can access the homepage of FlexWATCH server by clicking the "Connect" icon.

Notice) If AOIP service is needed for remote access, make sure to setup AOIP function in the admin menu of your FlexWATCH server.

4) Run FlexWATCH Installer again, and select FlexWATCH on the search list, Click IP Setup and specify PPPoE option.



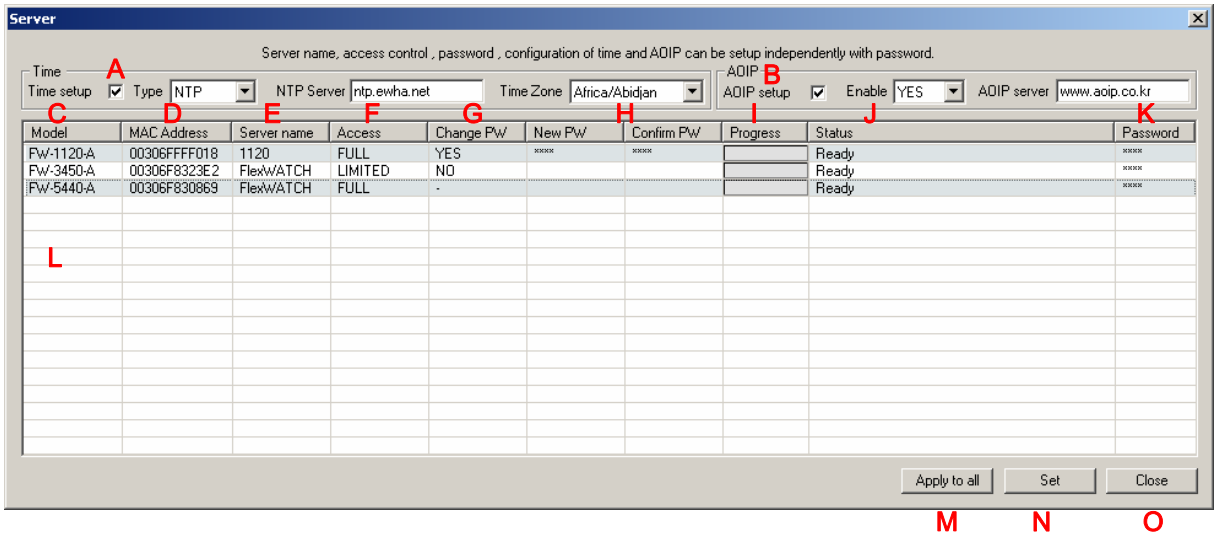
Menu	Description
A. IP Type	Select 'PPPoE'
B. Server Name	Type the name of your FlexWATCH server if you want to change.
C. HTTP Port	Input the web port to access the homepage of FlexWATCH. The default value is port 80.
D. PPPoE Setup	You can check out the correct ID / Password from your ISP.
PPPoE User Name	Input ID.
PPPoE Password	Input Password.
PPPoE Confirm	Input Confirmed Password.

E. Authentication Key	Password for authentication ID is root. The default value is root.
F. Save Configuration Option	
Save Configuration	Save all the changed configurations to Flash Memory.
Not Saving	Close the window without saving any changes. ***Warning) If selecting no saving, reconfiguration will be needed if the server powers off or reboots.***

5) Check if your PPPoE setup is correctly applied, and connect your FlexWATCH server to xDSL modem.

6. Basic Operating Condition Setup

6.1 Configuration menu

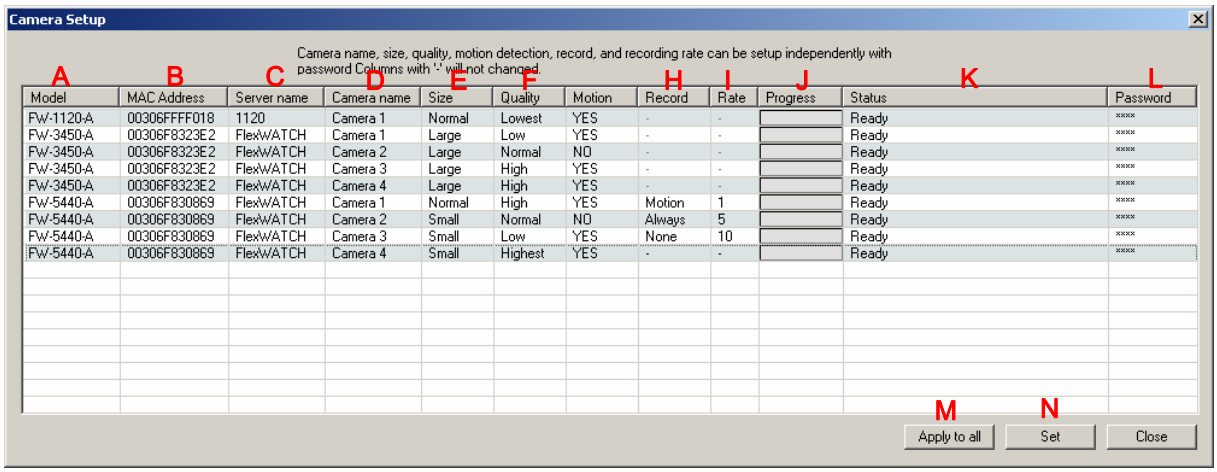


Menu	Description
A. Time setup	Setup the Time information.
Type	If selecting NTP, it can be set and applied via an NTP server. If selectung User, the time information of your PC with FlexWATCH Installer can be set and applied.
NTP Server	Input a proper NTP server address.

Time Zone	Select a proper Time Zone.
B. AOIP setup	Setup the AOIP service.
Enable	If YES, AOIP service will be enabled. If NO, AOIP service will be disabled.
AOIP server	Input a proper AOIP server address.
C. Model	Displays the model names of the selected FlexWATCH servers.
D. MAC Address	Displays the MAC addresses of the selected FlexWATCH servers.
E. Server name	Type the name of your FlexWATCH server if you want to change.
F. Access	Setup the access permission level to FlexWATCH server. If select Full, ID/PW is not required to access to FlexWATCH server. If select Limited, ID/PW is required to access.
G. Change PW	Select YES if you want to change the Password.
H. New PW	Input the new password.
I. Confirm PW	Input the new password again.
J. Progress	Displays the progress when click 'Set' button.
K. Status	Displays the status of the progress.
L. Password	Input the admin password (root). If not, any changed values can not be applied.
M. Apply to all	If you click it after setting a listed item, the same values will be automatically applied to the other listed items.
L. Set	Applies the changed settings to FlexWATCH server.
O. Close	Close the dialog window without saving.

7. Camera & Recording Condition Setup

7.1 Configuration menu


Camera Setup
Camera name, size, quality, motion detection, record, and recording rate can be setup independently with password Columns with '-' will not changed
A B C D E F H I J K L
Model | MAC Address | Server name | Camera name | Size | Quality | Motion | Record | Rate | Progress | Status | Password
FW-1120-A | 00306FFFF018 | 1120 | Camera 1 | Normal | Lowest | YES | - | - | | Ready | ****
FW-3450-A | 00306F8323E2 | FlexWATCH | Camera 1 | Large | Low | YES | - | - | | Ready | ****
FW-3450-A | 00306F8323E2 | FlexWATCH | Camera 2 | Large | Normal | NO | - | - | | Ready | ****
FW-3450-A | 00306F8323E2 | FlexWATCH | Camera 3 | Large | High | YES | - | - | | Ready | ****
FW-3450-A | 00306F8323E2 | FlexWATCH | Camera 4 | Large | High | YES | - | - | | Ready | ****
FW-5440-A | 00306F830869 | FlexWATCH | Camera 1 | Normal | High | YES | Motion | 1 | | Ready | ****
FW-5440-A | 00306F830869 | FlexWATCH | Camera 2 | Small | Normal | NO | Always | 5 | | Ready | ****
FW-5440-A | 00306F830869 | FlexWATCH | Camera 3 | Small | Low | YES | None | 10 | | Ready | ****
FW-5440-A | 00306F830869 | FlexWATCH | Camera 4 | Small | Highest | YES | - | - | | Ready | ****
M N
Apply to all
Set
Close

Menu	Description
A. Model	Displays the model names of the selected FlexWATCH servers.
B. MAC Address	Displays the MAC addresses of the selected FlexWATCH servers.
C. Server name	Type the name of your FlexWATCH server if you want to change.
D. Camera name	Type the name of your Camera if you want to change.
E. Size	Select the image resolution. ***Notice) For MPEG4 supported FlexWATCH, the same image resolution will be applied to the other channels at the same device.***
F. Quality	Select the image resolution.
G. Motion	If YES, the motion detection function will be enabled.
H. Record	Setup the recording condition. Motion – Recording only when motion is triggered. 'Motion' needs to be set to 'YES'. Always – Recording always. None – Disable the recording function. ***Notice) For FlexWATCH NVR models with built-in HDD.***
I. Rate	Setup the recording frame rate (fps)
J. Progress	Displays the progress when click 'Set' button.

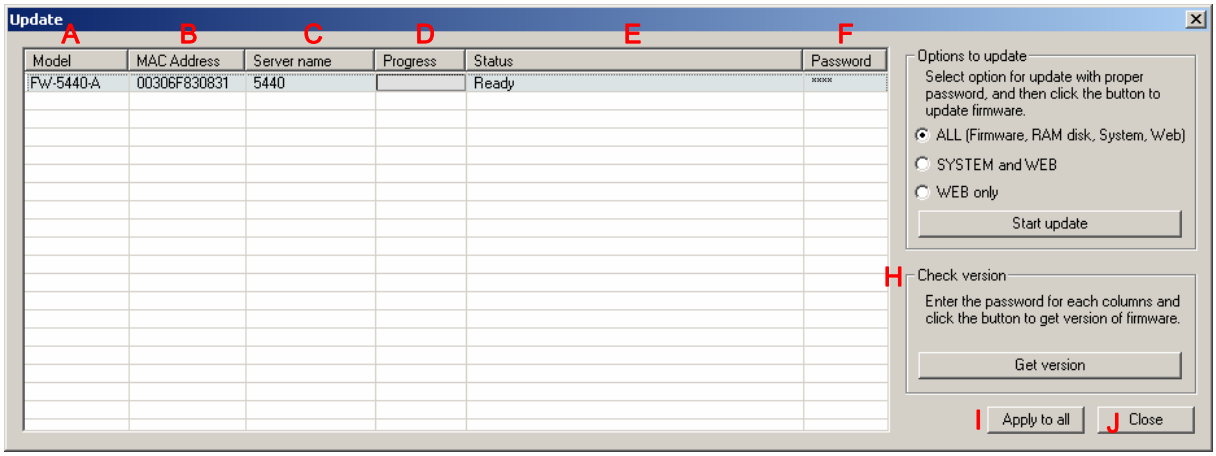
K. Status	Displays the status of the progress.
L. Password	Input the admin password (root). If not, any changed values can not be applied.
M. Apply to all	If you click it after setting a listed item, the same values will be automatically applied to the other listed items.
N. Set	Applies the changed settings to FlexWATCH server.
O. Close	Close the dialog.

8. Firmware Update

8.1 Firmware update process

1) Connect your PC and FlexWATCH server in the network.
2) Run FlexWATCH Installer and click Search. Select the FlexWATCH server you need to update the firmware. If IP Setup is not made, assign a static IP address according to the steps in section '5.1 Static IP Assignment, Manual or Auto Setup'.
3) Click "FlexWATCH Update" button.
4) A new folder will be automatically created under the location of FlexWATCH Installer files. (C:\Program Files\FlexWATCH\FlexWATCH Installer)
   For example, 'FW-3440-A' folder will be created if FW-3440-A model is selected.
5) Place the proper firmware files into the folder that has been created at step 4.
6) Input the correct password (root), and click 'Start update' button.
7) If the update process is completed, FlexWATCH server will be automatically rebooted.
8) Wait until the rebooting is done (2~4 min), and click 'Get version' button to check out the result.

8.2 Configuration menu



Menu	Description
A. Model	Displays the model names of the selected FlexWATCH servers.
B. MAC Address	Displays the MAC addresses of the selected FlexWATCH servers.
C. Server name	Type the name of your FlexWATCH server if you want to change.
D. Progress	Displays the progress when click 'Set' button.
E. Status	Displays the status of the progress.
F. Password	Input the admin password (root). If not, any changed values can not be applied.
G. Option to update	Select option for update.
H. Start update	After input the correct password, click start update. ***Warning) Do not power-off or disconnect FlexWATCH server during the update process.***
I. Get version	Displays the current firmware version.
J. Apply to all	If you click it after setting a listed item, the same values will be automatically applied to the other listed items.
K. Close	Close the dialog window.

9. FlexWATCH Live-view

After IP assignment, you can examine the live view from FlexWATCH by using standard web browser as Internet Explorer or Netscape. Right click on server you wish to connect, click **Connect** icon on FlexWATCH Explorer, then web browser will run and connect to FlexWATCH server automatically.

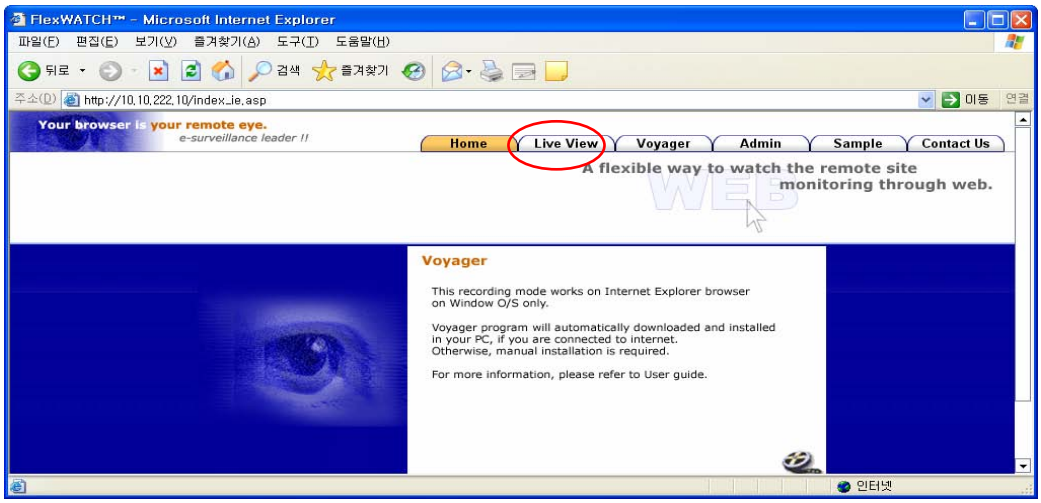
When using static IP, Input IP address on browser to access FlexWATCH server. When using dynamic IP as DHCP or PPPoE, connect to AOIP server and access FlexWATCH server through AOIP account login.

You can see live-view images on **Live View menu**.

9.1 FlexWATCH Live View

Live View is Active-X control program to see images and control PTZ or AUX. Live View Control program must be installed to see images, if not, it will be installed on Internet automatically. Please install Live View Control from enclosed CD if Internet connection is not present or does not start automatically.

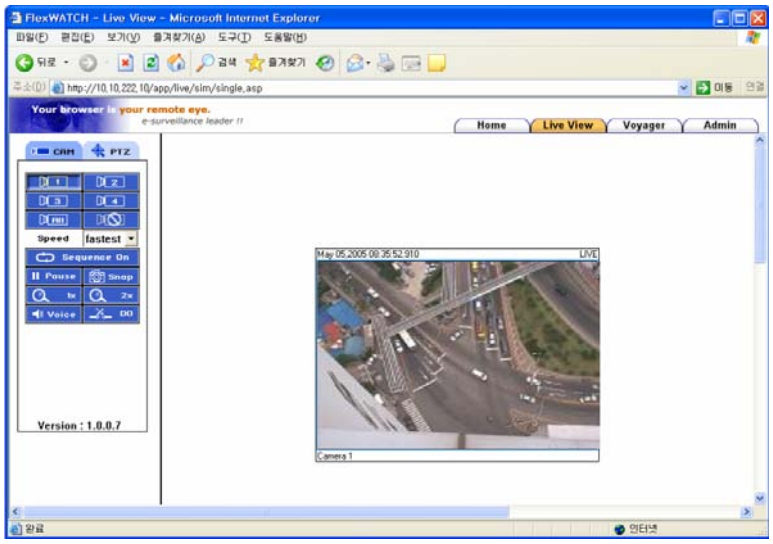
1) Click **Live View** on the homepage of FlexWATCH.


FlexWATCH™ – Microsoft Internet Explorer
http://10.10.222.10/index_ie.asp
Your browser is your remote eye.
e-surveillance leader !!
Home
Live View
Voyager
Admin
Sample
Contact Us
A flexible way to watch the remote site monitoring through web.
Voyager
This recording mode works on Internet Explorer browser on Window O/S only.
Voyager program will automatically downloaded and installed in your PC, if you are connected to internet. Otherwise, manual installation is required.
For more information, please refer to User guide.

2) Security warning window will appear. Click **Install**.

Internet Explorer - Security Warning
Do you want to install this software?
Publisher: Seyeon Tech Co., Ltd.
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

3) Live-view images will be displayed as below.



FlexWATCH User Manual

Part 2

(Network Configuration and FlexWATCH Setting)

Version 3.0

Seyeon Technology Co., Ltd

www.intplus.es

www.flexwatch.es

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1. Network Diagram

FlexWATCH® products work under IP network such as leased line, cable model, xDSL modem, PSTN modem. FlexWATCH can also work under public network or private network. The network environment will vary with users' goals and needs; however, basic applications with FlexWATCH® products can be followings.

1.1. Private Network

- Private network without Internet connection.

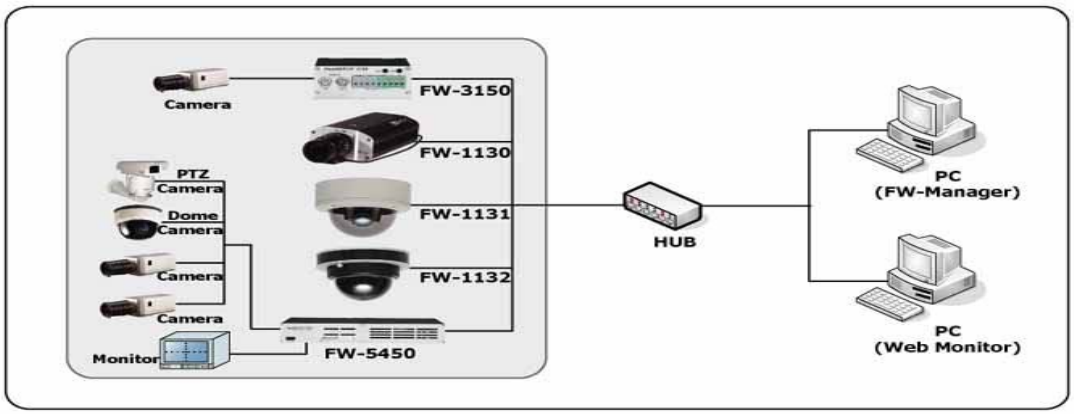


Figure 1 Private Network Diagram

1.2. Leased Line Network

- In case of leased line, most users use Public static IP, they assign public static IP to FlexWATCH server and they can view the images from FlexWATCH locally or remotely via Internet.

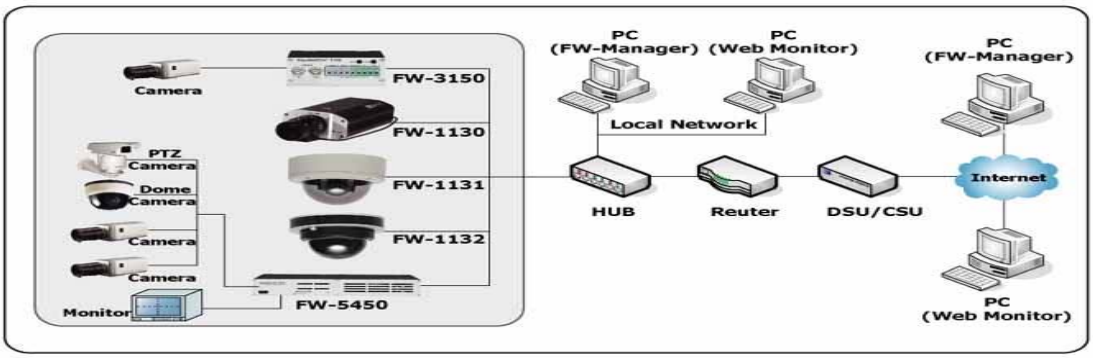


Figure 2 Leased Static IP Diagram

1.3. Cable/xDSL Modem Network with Static IP

- You can use Static IP through cable/xDSL modem to view the images from FlexWATCH.

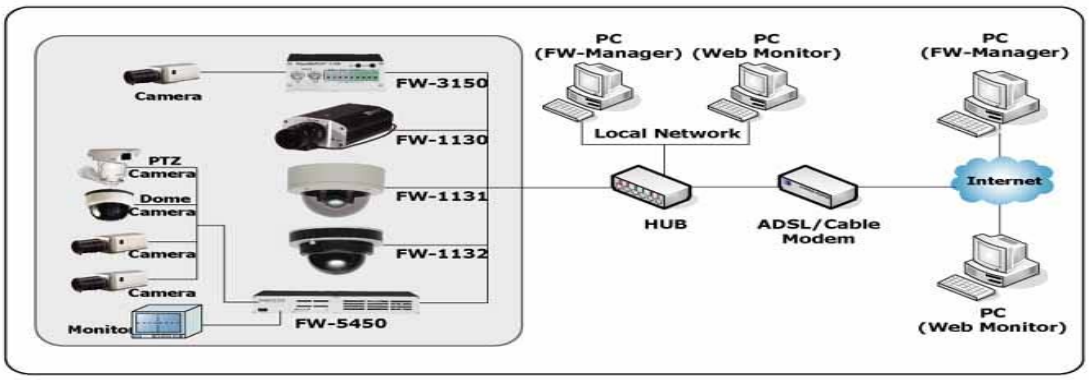


Figure 3 ADSL/Cable Modem (Static IP) Diagram

1.4. Cable/xDSL Modem Network with Dynamic IP

- You can use Dynamic IP through cable/xDSL modem to view the images from FlexWATCH. In this case, you need to register for AOIP service provided by Seyeon Tech.

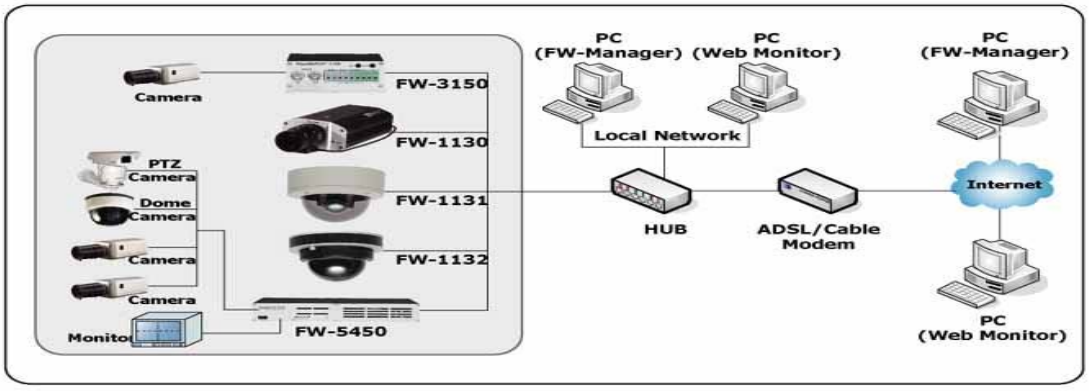


Figure 4 ADSL/Cable Modem (dynamic IP) Diagram

1.5. PSTN Modem with Dial-out

You can use PSTN modem to have FlexWATCH server connected to the Internet. FlexWATCH makes a call to ISP (Dial-out) and gets connected to the Internet. In this case, the assigned IP by ISP is Public Dynamic IP. Thus, you can view the images from FlexWATCH servers by AOIP service provided by Seyeon Tech.

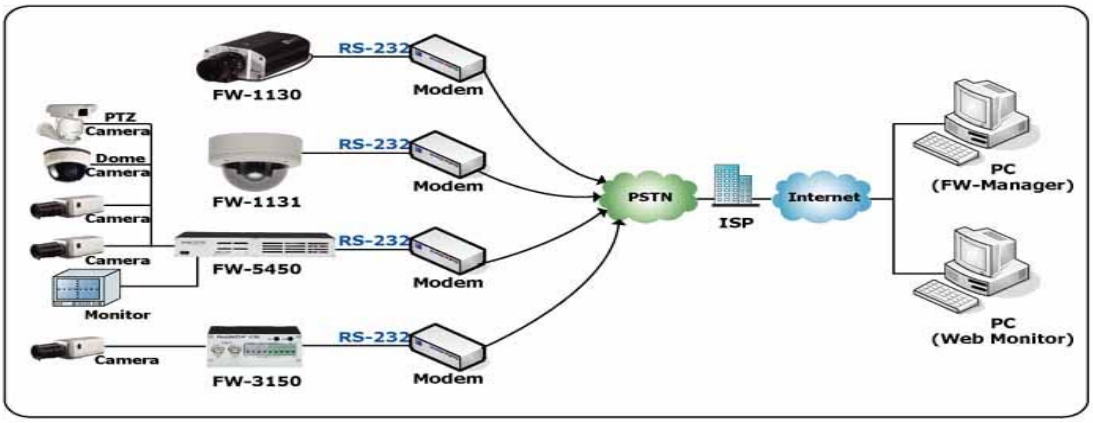


Figure 5 Dial Out Connection (Modem) Diagram

1.6. PSTN Modem with Dial-in

You have FlexWATCH server connected to PSTN modem and remote PC can connect to this PSTN modem. Then, FlexWATCH accepts the call from remote PC (Dial-in).

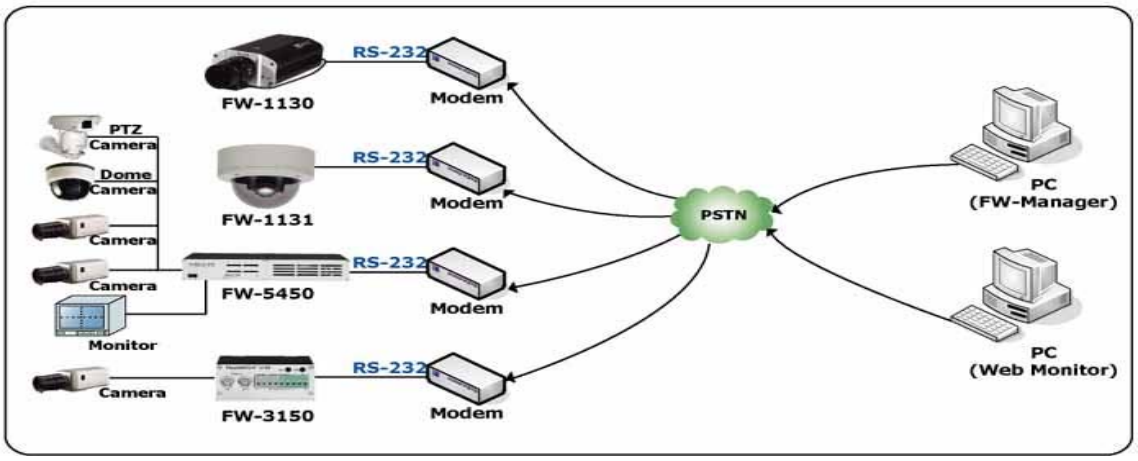


Figure 6 Dial in Connection (Modem) Diagram

2. Network Configuration

The very first thing you need to do for using FlexWATCH is proper IP assignment for your FlexWATCH servers. After this, you can go on to the next steps. There are two methods can be used. The first method is to use FlexWATCH Installer included in CD and the other method is to use terminal emulation program (ex. Microsoft Windows's Hyper Terminal).

2.1. Through FlexWATCH Installer

2.1.1. What is FlexWATCH Installer?

FlexWATCH Installer is a program which enables you to simply configure the FlexWATCH Products such as IP setting, server and camera setting, firmware update, and so on. Please refer to FlexWATCH Installer manual included in CD-ROM provided with the product you purchased and you may want to refer to latest available documents on our website (http://www.flewatch.es). FlexWATCH Installer manual has been written on the assumption that you are familiar with basic network knowledge such as IP address, LAN, HUB, Router, and so on. For the basic network knowledge, please refer to the related books, or you may ask your network service provider or network administrator.

FlexWATCH Installer can be used for FlexWATCH Linux series (FlexWATCH 1110 / 1120 / 1130 / 1161 / 2140 / 2150 / 3110 / 3150 / 3440 / 3450 / 5000 / 5440 / 5450) products; however, there may be some differences based on models.

2.1.2. Installation of FlexWATCH Installer

1. Please double click on the FlexWATCH Installer Icon.
2. Click Next.
3. Please Check the version of FlexWATCH Installer and if you want to install it, please click Next.

FlexWATCH Installer 1.0.0 Setup
Welcome to the FlexWATCH Installer 1.0.0 Setup Wizard
This wizard will guide you through the installation of FlexWATCH Installer 1.0.0.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

Figure 7 FlexWATCH Installer First Installation Screen

4. Select the installation location, please click Install.

The default location is C:\ProgramFiles\FlexWATCH\FlexWATCH Installer, and if you want to change the location, you may click Browse and select the desired folder.

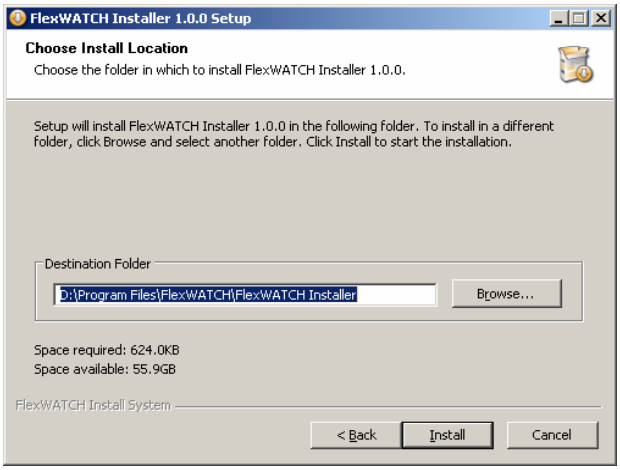

FlexWATCH Installer 1.0.0 Setup
Choose Install Location
Choose the folder in which to install FlexWATCH Installer 1.0.0.
Setup will install FlexWATCH Installer 1.0.0 in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
D:\Program Files\FlexWATCH\FlexWATCH Installer
Browse...
Space required: 624.0KB
Space available: 55.9GB
FlexWATCH Install System
< Back
Install
Cancel

Figure 8 FlexWATCH Installer Folder Selection

5. Click Finish (Installation Completion)

All the required files will be installed and the installation will be done by clicking Finish. .

FlexWATCH Installer 1.0.0 Setup
Completing the FlexWATCH Installer 1.0.0 Setup Wizard
FlexWATCH Installer 1.0.0 has been installed on your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

Figure 9 FlexWATCH Installer Installation Completion

2.2. How to Use FlexWATCH Installer

2.2.1. How to Run FlexWATCH Installer

To run FlexWATCH Installer, please double-click FlexWATCH Installer icon in desktop screen or click the icon located in Programs shown as below.

Figure 10 FlexWATCH-Installer How to Run

2.2.2. Program Menu Description

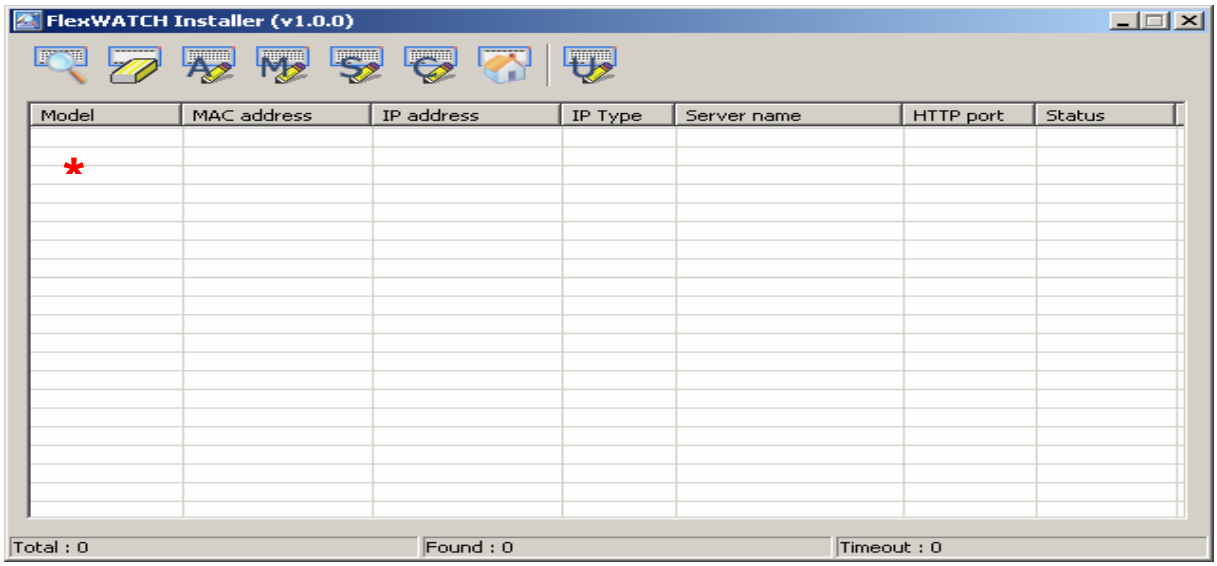


Figure 11 FlexWATCH Installer's First Screen

Menu	Description
Search FlexWATCH	Search and show the list of FlexWATCH Linux series installed in the same LAN of your PC.
Clear FlexWATCH list	Clear all the list of FlexWATCH products.
Automatic IP setup	FlexWATCH Installer will check the network information and you can set up IP automatically. TIP) IP address will be also assigned automatically by adding 1.
Manual IP setup	You can set up IP manually.
Server Setup	Configure the FlexWATCH server.
Camera Setup	Configure the FlexWATCH camera
Connect FlexWATCH	Connect to Homepage of selected FlexWATCH Notice) Class of IP address should be the same between PC and FlexWATCH server.
Update firmware	Update the firmware of FlexWATCH.
*Searched Result List	Shows searched list of FlexWATCH
Total	Shows the total number of searched FlexWATCH servers.

Found	Shows the total number of searched FlexWATCH servers with normal respond.
Timeout	Shows the total number of FlexWATCH servers with no response on search again.

2.2.3. Right Mouse Button Menu

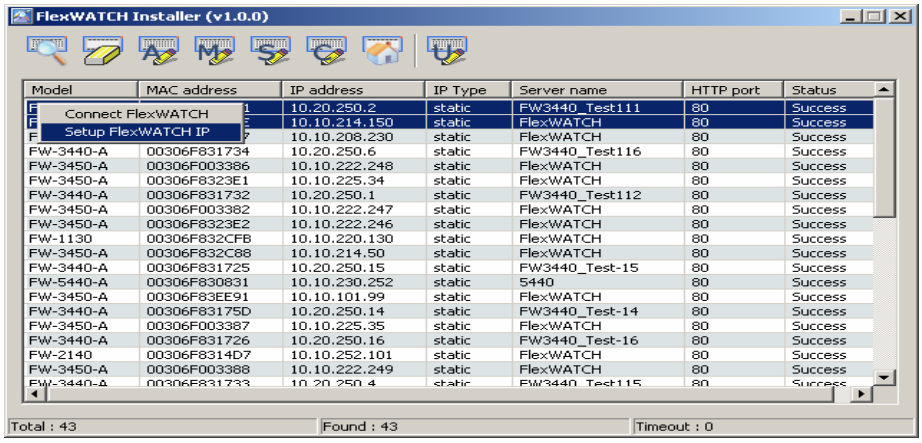

FlexWATCH Installer (v1.0.0)
Model
MAC address
IP address
IP Type
Server name
HTTP port
Status
Connect FlexWATCH
Setup FlexWATCH IP
10.20.250.2 static FW3440_Test111 80 Success
10.10.214.150 static FlexWATCH 80 Success
10.10.208.230 static FlexWATCH 80 Success
FW-3440-A 00306F831734 10.20.250.6 static FW3440_Test116 80 Success
FW-3450-A 00306F003386 10.10.222.248 static FlexWATCH 80 Success
FW-3450-A 00306F8323E1 10.10.225.34 static FlexWATCH 80 Success
FW-3440-A 00306F831732 10.20.250.1 static FW3440_Test112 80 Success
FW-3450-A 00306F003382 10.10.222.247 static FlexWATCH 80 Success
FW-3450-A 00306F8323E2 10.10.222.246 static FlexWATCH 80 Success
FW-1130 00306F832CFB 10.10.220.130 static FlexWATCH 80 Success
FW-3450-A 00306F832C88 10.10.214.50 static FlexWATCH 80 Success
FW-3440-A 00306F831725 10.20.250.15 static FW3440_Test-15 80 Success
FW-5440-A 00306F830831 10.10.230.252 static 5440 80 Success
FW-3450-A 00306F83EE91 10.10.101.99 static FlexWATCH 80 Success
FW-3440-A 00306F83175D 10.20.250.14 static FW3440_Test-14 80 Success
FW-3450-A 00306F003387 10.10.225.35 static FlexWATCH 80 Success
FW-3440-A 00306F831726 10.20.250.16 static FW3440_Test-16 80 Success
FW-2140 00306F8314D7 10.10.252.101 static FlexWATCH 80 Success
FW-3450-A 00306F003388 10.10.222.249 static FlexWATCH 80 Success
Total : 43
Found : 43
Timeout : 0

Figure 12 FlexWATCH Installer Menu

Select one of the searched products and click Right Mouse Button for menu.

Menu	Description
Connect FlexWATCH	Connect to the Homepage of selected FlexWATCH server. Notice) Class of IP address should be the same between PC and FlexWATCH.
Setup FlexWATCH IP	Configure the network setting of the selected FlexWATCH server.

TIP) More information on IP setting will be further discussed in 2.3 IP assignment.

2.3. IP Assignment

There are three different ways of IP setup for the network connection of your FlexWATCH server.

1. Static IP Assignment

General IP assignment method, to setup public or private static IP address.

2. IP Assignment by DHCP

IP assignment method, using DHCP to connect FlexWATCH by cable modem or VDSL.

3. IP Assignment by PPPoE

IP assignment method using PPPoE to connect FlexWATCH by xDSL.

2.3.1. Diagram between FlexWATCH and PC

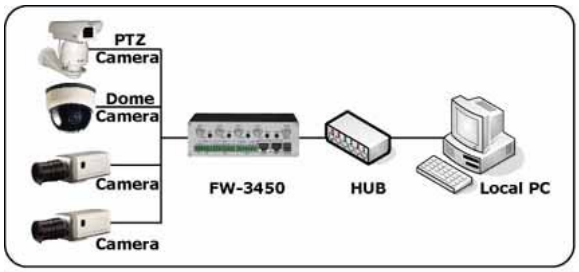


Figure 13 Connection through a HUB

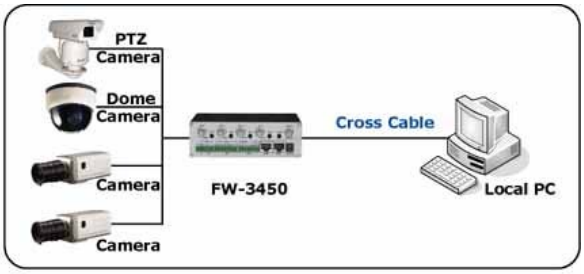


Figure 14 Connection FlexWATCH to PC

Please use Direct Cable when you use a Hub while you use Cross-Over Cable for direct connection between FlexWATCH and PC.

2.3.2. Static IP assignment

2.3.2.1. Manual IP Assignment

There are two types of static IP including public IP or private IP in LAN with an IP sharer or a router.

1. Please run FlexWATCH Installer, and search to see available FlexWATCH servers on the list. Then, please select the server from the list and click on IP Setup button or IP Setup from the right mouse button menu.

- In case of selecting 1 server from the list

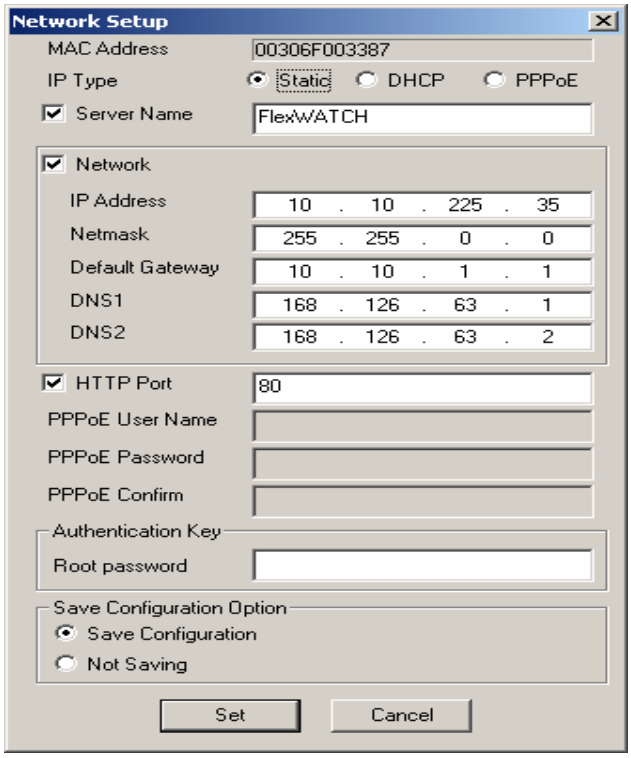


Figure 15 In case of selecting 1 server for Static IP Assignment

Menu	Description
MAC Address	MAC address of selected FlexWATCH
IP Type	Please select Static for Static IP Assignment
Server Name	Assign a name to selected FlexWATCH
Network	Setting for the general Network Information
IP Address	Enter IP address for FlexWATCH server
Netmask	Netmask is for dividing IP classes. Please ask the network administrator before setting.
Default Gateway	Default gateway will be automatically searched by FlexWATCH Installer.
DNS1, DNS2	Please enter proper DNS (Domain Name Service) address in DNS1 and DNS2. If you don't know this, please ask the network administrator.
HTTP Port	Default web port for FlexWATCH. Default value is 80.
Root password	Password for FlexWATCH server to authenticate a valid user. The default password for FlexWATCH is root.
Save Configuration Option	

Save Configuration	All the changes will be stored in Flash Memory.
Not Saving	All the changes will not be stored in Flash Memory. Notice) If you choose “Not Saving”, all the adjusted settings will not be saved, Therefore, after rebooting, new change won’t be applied.

- In case of selecting 2 or more servers from the list

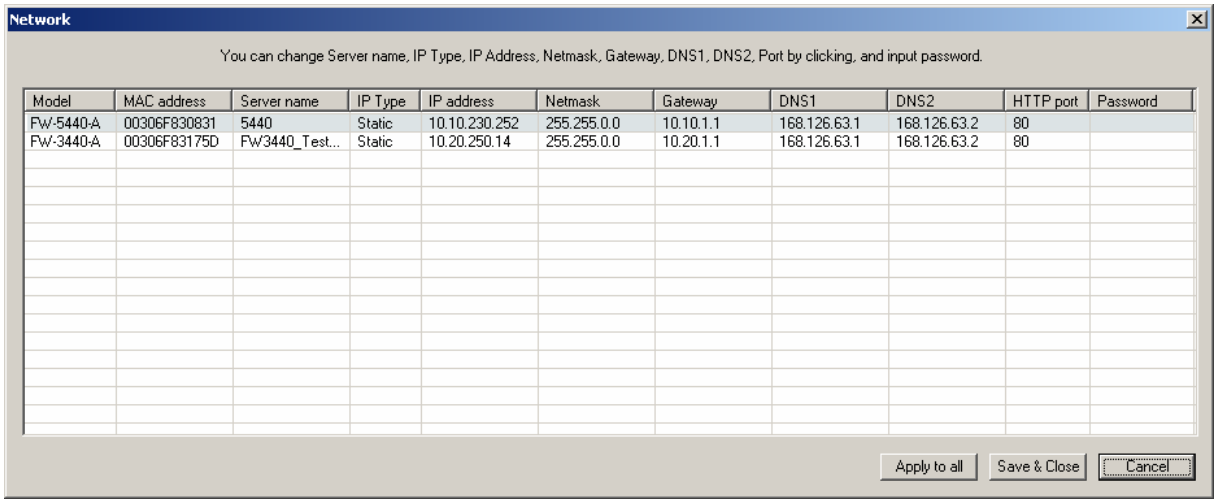


Figure 16 In case of selecting 2 or more servers for Static IP Assignment

Menu	Description
Model	Model name of selected FlexWATCH.
MAC address	MAC address of selected FlexWATCH
Server name	Assign a name to selected FlexWATCH
IP Type	Please select Static for Static IP Assignment
IP address	Enter proper IP address for FlexWATCH server
Netmask	A Netmask is used to divide an IP address into subnets and specify the network available hosts. Contact your network administrator for more details.
Gateway	Default gateway will be automatically searched by FlexWATCH Installer.
DNS1, DNS2	Please enter proper DNS (Domain Name Service) address in DNS1 and DNS2. If you don’t know this, please ask the network administrator.
HTTP port	Default web port for FlexWATCH. Default value is 80.
Password	Password for FlexWATCH server to authenticate a valid user. The default password for FlexWATCH is root.

Apply to all	Please use this button when you enter the same values for multiple servers. Please click one of the listed servers and make changes as you wish. The values of rest of FW servers will be changed accordingly. However, server names will be in the format of "your chosen server name"+ascending number. And IP address will be also assigned automatically by adding 1.
Save & Close	Will save all the changes to FlexWATCH servers and close network setting window. (All the adjusted settings will be stored in Flash Memory)
Cancel	Cancel the all the adjusted setting and close the network setting window.

2. After IP configuration, click "Connect" icon to access FlexWATCH. See live view of FlexWATCH or specify system configuration on admin menu. Please refer to chapter 3.2 Live View and "User Manual for FlexWATCH" for more details of system configuration and live view.

2.3.2.2. Automatic IP Assignment

FlexWATCH Installer can automatically find available IP address from the network in which FlexWATCH Installer is being used. You can use the IP address searched by FlexWATCH Installer or you may change the IP by yourself.

Notice) Any of the auto-assigned IP may cause a network collision and problem if it's already assigned to another device in the same network. Auto-assigned IP is assigned based on C-Class or its Subnet.

1. Please run FlexWATCH Installer, and search to see available FlexWATCH servers on the list. Then, please select the server from the list and click on Automatic IP Setup button.
2. In case of selecting 1 server from the list

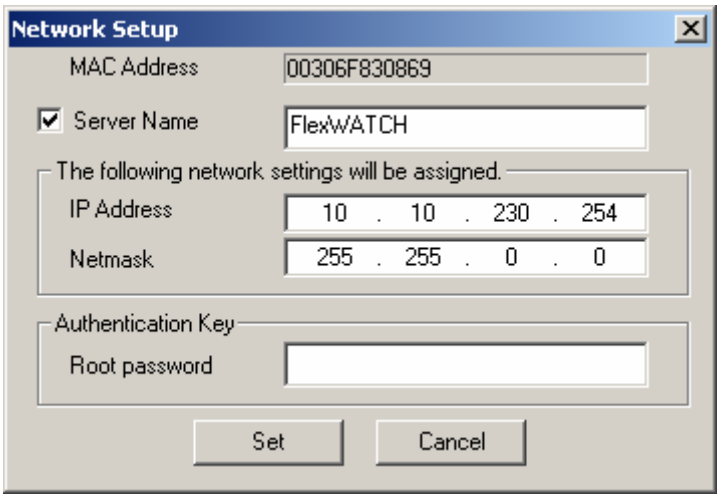


Figure 17 In case of selecting 1 server for Automatic Static IP Assignment

Menu	Description
Server Name	Assign a name to selected FlexWATCH
Network	Setting for the general Network Information
IP Address	Automatic assigned IP will be shown. You may use or change it. Notice) In case of IP conflict, you shall assign proper IP to FlexWATCH server.
Netmask	Automatic assigned Netmask will be shown. You may use or change it. Netmask is for dividing IP classes. Please ask the network administrator for more info.
Root password	Password for FlexWATCH server to authenticate a valid user. The default password for FlexWATCH is root.

- In case of selecting 2 or more servers from the list

TIP) Please refer to 2.3.2.1 Manual IP Assignment

2.3.3. DHCP IP Assignment

When your local network is managed by DHCP server, cable modem, or VDSL, DHCP IP Assignment is used. xDSL with auto-dial up also needs DHCP IP Assignment.

1. Connect your PC and FlexWATCH server in the network. Setup a static IP address according to the steps in chapter '2.3.2. Static IP Assignment'
2. After IP setup, check out if you can access to the homepage of FlexWATCH server by clicking "Connect" icon.

TIP) Please enable AOIP option in Admin menu if you want to have FlexWATCH server to be accessible by remote users.

3. Run FlexWATCH Installer again, and select FlexWATCH on the search list, Click IP Setup button and specify DHCP option.

- In case of selecting 1 server

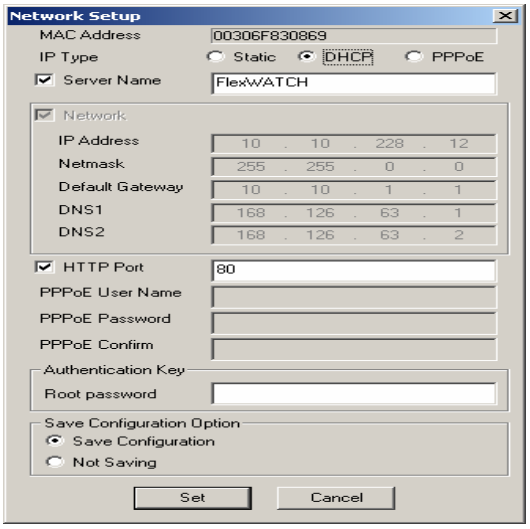


Figure 18 In case of selecting 1 server for DHCP IP Assignment

Menu	Description
IP Type	Select 'DHCP'
Server Name	Assign a name to selected FlexWATCH
HTTP Port	Default web port for FlexWATCH. Default value is 80.
Root password	Password for FlexWATCH server to authenticate a valid user. The default password for FlexWATCH is root.
Save Configuration Option	
Save Configuration	All the changes will be stored in Flash Memory.
Not Saving	All the changes will not be stored in Flash Memory. Notice) If you choose "Not Saving", all the adjusted settings will not be saved, Therefore, after rebooting, new change won't be applied.

- In case of selecting 2 or more servers for DHCP IP Assignment

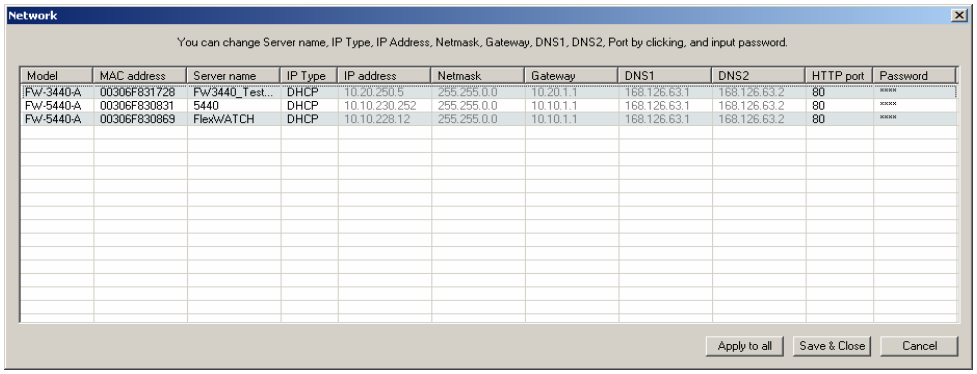

Network
You can change Server name, IP Type, IP Address, Netmask, Gateway, DNS1, DNS2, Port by clicking, and input password.
Model
MAC address
Server name
IP Type
IP address
Netmask
Gateway
DNS1
DNS2
HTTP port
Password
FW-3440-A 00306F831728 FW3440_Test... DHCP 10.20.250.5 255.255.0.0 10.20.1.1 168.126.63.1 168.126.63.2 80 *****
FW-5440-A 00306F830831 5440 DHCP 10.10.230.252 255.255.0.0 10.10.1.1 168.126.63.1 168.126.63.2 80 *****
FW-5440-A 00306F830869 FlexWATCH DHCP 10.10.228.12 255.255.0.0 10.10.1.1 168.126.63.1 168.126.63.2 80 *****
Apply to all
Save & Close
Cancel

Figure 19 In case of selecting 2 or more servers for DHCP IP Assignment

TIP) In case of multiple DHCP settings, you can't set IP address, Netmask, Gateway, DNS1, 2. Please refer to Static Manual IP Assignment.

4. Check out if your DHCP setup is correctly applied; please connect FlexWATCH to VDSL or Cable Modem. If your server is under Local network, please connect FlexWATCH to a HUB in Local Network.

2.3.4. IP Assignment by PPPoE

1. Connect your PC and FlexWATCH server in the network. Setup a static IP address according to the steps in chapter '2.3.2. Static IP Assignment'.
2. After IP setup, check out if you can access to the homepage of FlexWATCH server by clicking "Connect" icon.

TIP) Please enable AOIP option in Admin menu if you want to have FlexWATCH server to be accessible by remote users.

3. Run FlexWATCH Installer again, and select FlexWATCH on the search list, Click IP Setup button and specify PPPoE option.

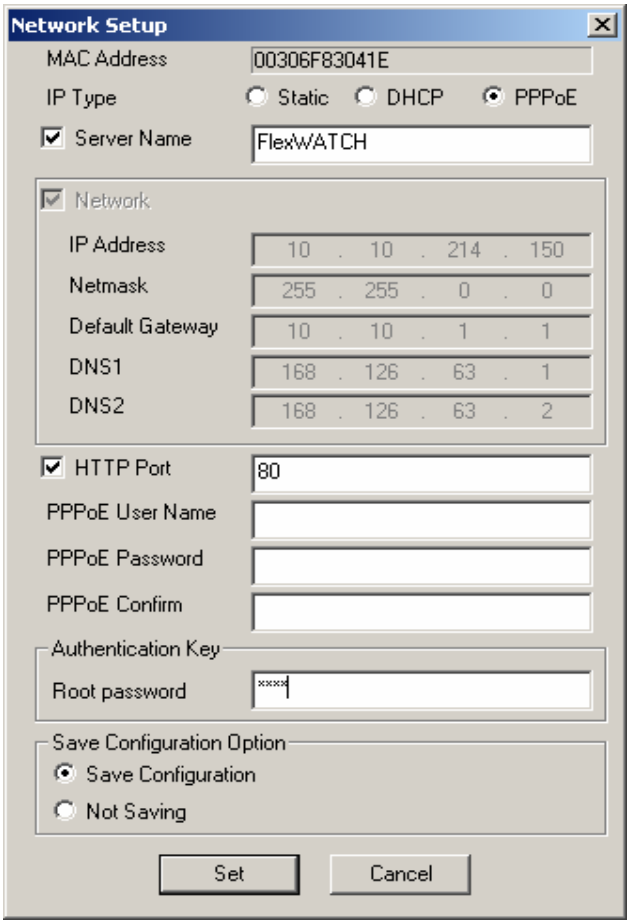


Figure 20 In case of selecting 1 server for PPPoE IP Assignment

Menu	Description
IP Type	Select 'PPPoE'
Server Name	Assign a name to selected FlexWATCH
HTTP Port	Default web port for FlexWATCH. Default value is 80.
PPPoE Setup	*Notice) You can check out the correct ID/Password from your ISP.*
PPPoE User Name	Enter PPPoE ID
PPPoE Password	Enter PPPoE Password
PPPoE Confirm	Enter PPPoE Confirmed Password
Root Password	Password for FlexWATCH server to authenticate a valid user. The default password for FlexWATCH is root.
Save Configuration Option	
Save Configuration	All the changes will be stored in Flash Memory.

Not Saving	All the changes will not be stored in Flash Memory. Notice) If you choose “Not Saving”, all the adjusted settings will not be saved, Therefore, after rebooting, new change won’t be applied.

4. Check out if your PPPoE setup is correctly applied; please connect FlexWATCH directly to xDSL modem.

Notice) No multiple PPPoE setting is supported.

2.4. Network configuration through Hyper Terminal mode

Microsoft Windows provides Terminal emulation program, named Hyper Terminal. For HyperTerminal connection, Power, RS-232 Cable and LAN cable must be connected to FlexWATCH server with user’s PC. LAN cable is to run Web browser after configuration using HyperTerminal. You can continue below configuration after Network setting, and the next process will be same as using Installation Wizard Program.

2.4.1. Hyper Terminal Installation Wizard Program

1. Link up with the provided serial cable between COM port at FlexWATCH server and COM1 or COM2 at user’s PC.

2. Run Hyper Terminal Program on user’s PC.

Window start →All Programs→ Accessories → Communications → Hyper Terminal

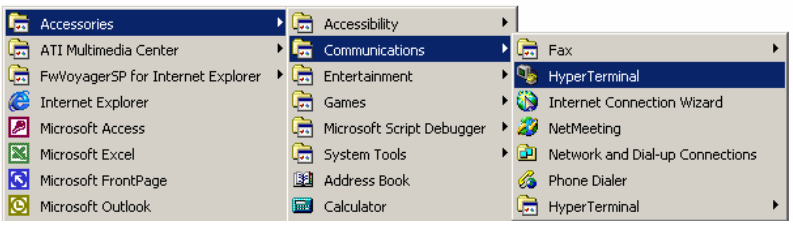


Figure 21 Hyper Terminal Program Location

3. If Hyper Terminal window come up as below, input HyperTerminal name (ex. FlexWATCH) and press ‘OK’ button.

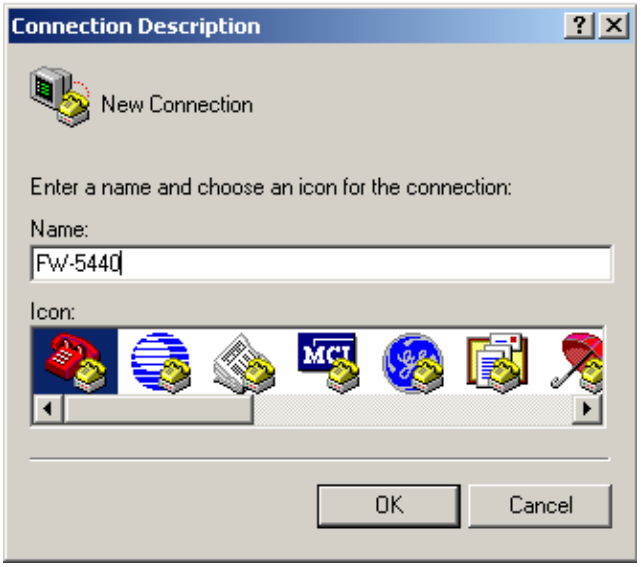


Figure 22 COM Port Connection Description

4. Select the connected COM port with serial cable and press OK button.

Figure 23 COM Port Connect To Information

5. When 'Port Settings' window shows up, input each values from the table below.

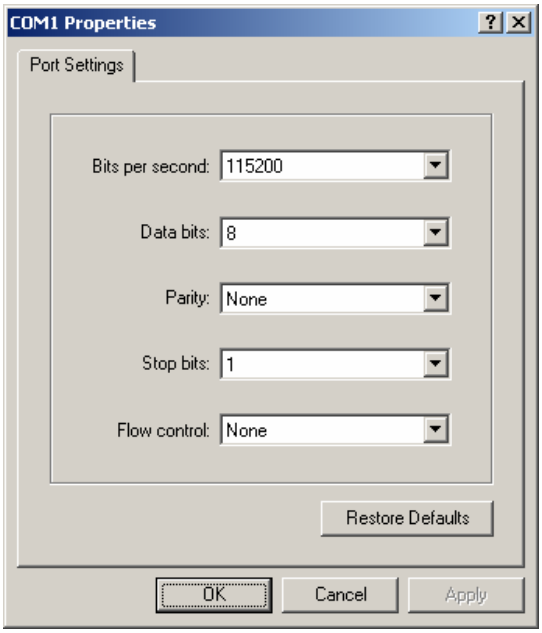


Figure 24 COM Port Settings

Serial Port Settings	Value
Bits per Second	115200
Data bits	8
Parity	None
Stop bits	1
Flow control	None

2.4.2. System Login and Network Configuration by Hyper Terminal

1. After setting Hyper Terminal, press Enter key several times and then you can see messages below. Enter Login ID and Password. (Factory defaults for Admin ID and Password is root/root.)

```
Seyeon Tech Co., Ltd. 2001-2003
Linux Kernel 2.4.21-syl1

FlexWATCH login:
```

2. If you correctly enter ID and Password, 'bash#' prompt will show up as below.

```
FlexWATCH login: root
Password: root

 ------------------------------------------------------------
 SYSTEM      : FlexWATCH
 VERSION     : 3.0.070327-mpeg
 MODEL       : FW-5450-S
 ------------------------------------------------------------

login[504]: root login  on `ttyS0'

bash#
```

3. Input ‘netconfig eth1 IP, SubnetMask, Gateway’, and press Enter key as below. (e.g. bash# netconfig eth1 192.168.0.253 255.255.255.0 192.168.0.1)

```
bash# netconfig eth0 192.168.0.253
255.255.255.0 192.168.0.1
Your network configuration was changed.
Shutting down interface ppp2 [  OK  ]
Shutting down interface ppp1 [  OK  ]
Shutting down interface eth1 [  OK  ]
Shutting down interface eth0 [  OK  ]
Disabling IPv4 packet forwarding [  OK  ]
Setting network parameters [  OK  ]
Bringing up interface lo [  OK  ]
Bringing up interface eth0 [  OK  ]
Bringing up interface eth1 [  OK  ]
Bringing up interface ppp1 [  OK  ]
Your new network configuration was applied.
bash#
```

TIP) ‘Eth1’ is to set up IP at ‘WAN Port’. If you type in eth0, it will set up IP at ‘LAN Port.’

4. Please save all the changed settings for IP, subnet mask and Gateway into flash memory by ‘savecgf’ shown as below.

```
bash#
bash# savecfg
Saving a current config to flash memory
[  OK  ]
Updated flash
bash#
```

5. To check whether your Network configuration is correctly applied or not, press 'ifconfig' command, then following messages will show up. On the second line of the 'eth1' message, you can check the assigned IP and Mask values. Gateway value is not seen here. If the values are different from what you want to set-up, try again the Network configuration from step 4.

```
Bash# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:30:6F:48:64:86
          inet addr:10.20.30.40  Bcast:10.20.30.255
Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:100
          Interrupt:9
eth1      Link encap:Ethernet  HWaddr 00:30:6F:48:E4:86
          inet addr:192.168.0.253  Bcast:10.255.255.255
Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:1453 errors:0 dropped:0 overruns:0 frame:0
          TX packets:62 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:100
          Interrupt:10 Base address:0x2100
lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:309 errors:0 dropped:0 overruns:0 frame:0
          TX packets:309 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
```

2.4.3. Connection to Home Page

Run Internet Explorer Browser and enter the IP address. Then it will connect to the homepage of FlexWATCH server.

3. Introduction to FlexWATCH

3.1. “Home” screen

After network configuration from previous steps, users can access the FlexWATCH server through the web browser on the PC shown as below.

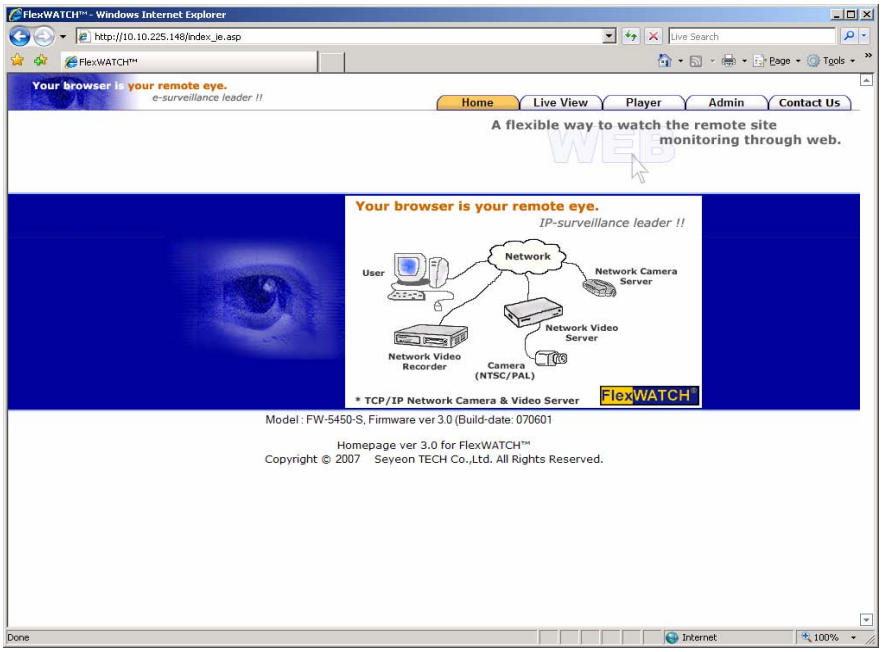


Figure 25 FlexWATCH Main page (FW-5450)

Move the cursor to the menu tabs on screen. The tab menu varies based on the models.

3.2. “Live View” menu

After connection to homepage, to view the images, please click on

tab. Then a security warning message window will be pop-up. Click ‘Yes’ then live view will be displayed. (Installation of ActiveX Control is needed to show live view when using windows XP).

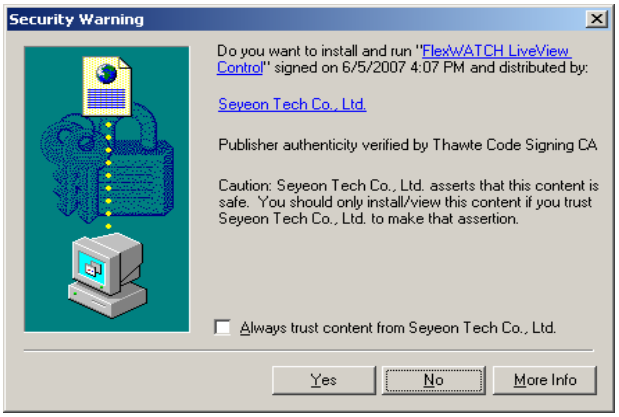

Security Warning
Do you want to install and run "FlexWATCH LiveView Control" signed on 6/5/2007 4:07 PM and distributed by:
Seyeon Tech Co., Ltd.
Publisher authenticity verified by Thawte Code Signing CA
Caution: Seyeon Tech Co., Ltd. asserts that this content is safe. You should only install/view this content if you trust Seyeon Tech Co., Ltd. to make that assertion.
Always trust content from Seyeon Tech Co., Ltd.
Yes
No
More Info

Figure 26 Windows 2000 Security Warning screen

Internet Explorer - Security Warning
Do you want to install this software?
Name: FlexWATCH LiveView Control
Publisher: Seyeon Tech Co., Ltd.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Figure 27 Windows XP Security Warning screen

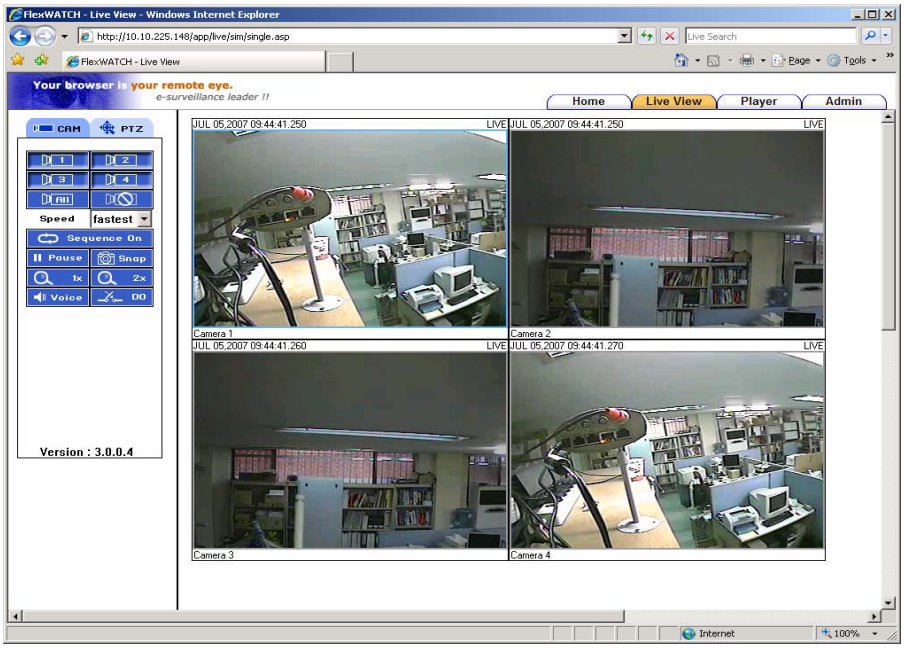
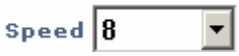
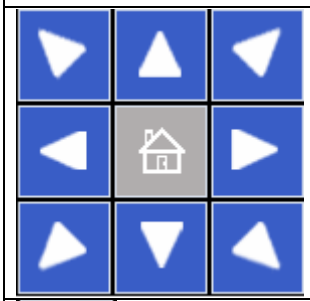


Figure 28 FlexWATCH LiveView Screen (FW5450)

Menu Description	
Image	Description
	Camera Control menu
	It shows the camera numbers. By clicking the camera number you can get any number of cameras displayed on the same screen. Camera 1,2,3,4, and all cameras can be displayed together.
	Display all channels together
	Hide current displaying channels
	Control Frame speed.
	Toggle button to pause or play current camera screen
	To view selected cameras sequentially by 4sec.
	You can take snapshots of video while viewing the live video as jpeg file format. It is named as "Year,Month,Day_Hour,Min,Sec_cam1.jpg"
	Enable two way voice communication
	Control DO for signal from DI

Camera Control Button description

Menu Description	
Image	Description
	PTZ Control menu button. Control menu will be displayed and enabled if a PTZ device is properly installed.
	Control PTZ speed.
	You can control PTZ device in 8 directions.
	Home function button. In case of Home function enabled PTZ camera, if you click this Home button, the camera will automatically move to Home position.
	You can control Zoom function
	You can control Focus of camera.
	You can control Autopan function.

	Calling preset position by selecting Preset # or name. You can set various preset positions and rename them in Admin menu.
	You can change PTZ control mode to Step or continuous. It may not work if your PTZ camera doesn't support this function.

PTZ Control button

Menu Description	
Image	Description
	It will show you more functions for PTZ or Receiver.
	You can run or stop preset Group. If your PTZ camera or Receiver doesn't support Group function, it will not be shown.
	You can run or stop Tour function of your PTZ camera. If your PTZ camera or Receiver doesn't support Tour function, it will not be shown.
	PTZ Power on/off button. If your PTZ camera or Receiver doesn't support this function, it will not be shown.
	Light on/off button. If your PTZ camera or Receiver doesn't support this function, it will not be shown.
	AUX1 on/off button. If your PTZ camera or Receiver doesn't support this function, it will not be shown.
	AUX2 on/off button. If your PTZ camera or Receiver doesn't support this function, it will not be shown.

PTZ Expand Control Button

3.3. "Player" Menu (FW-5400 Series only)

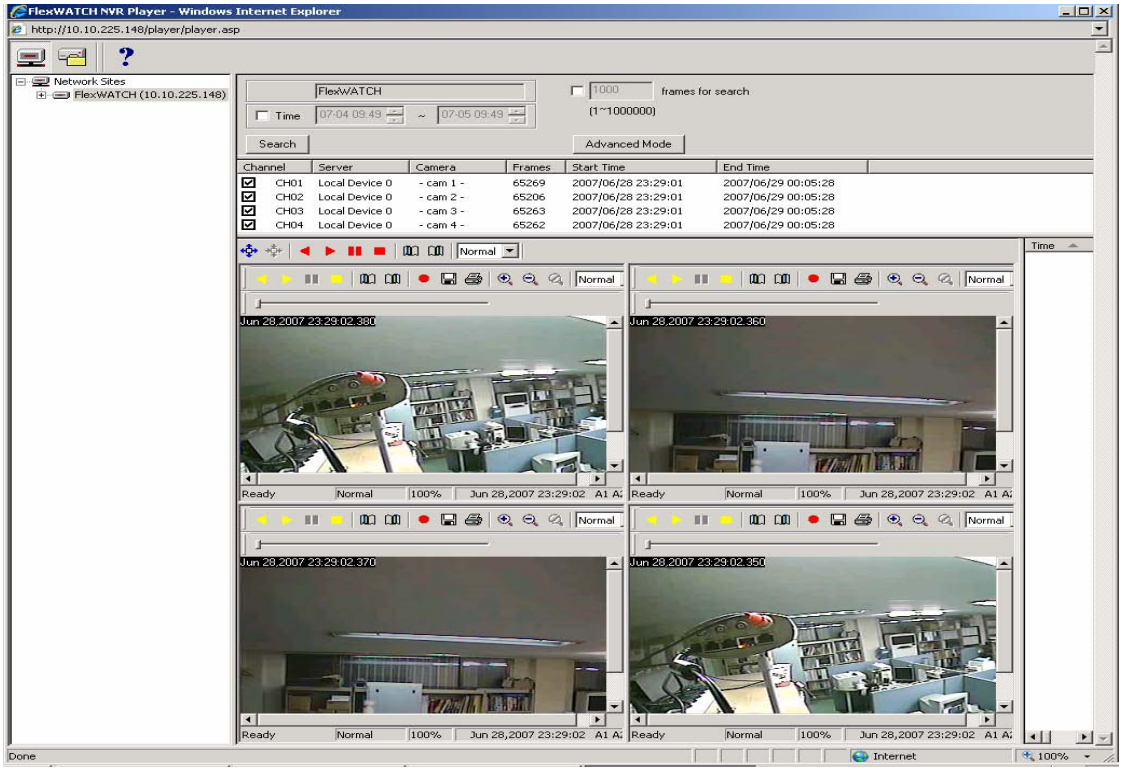


Figure 29 Player

This player supports remote playback for FW5400 series and local playback for your PC. If you click "Player" tab, FlexWATCH NVR Player S/W will be downloaded in client's viewing PC, once Client's PC is connected to the Internet. If it is not connected to the Internet, you need to install the NVR S/W manually. NVR software is provided in the product CD or can be downloaded from http://www.flexwatch.es . After the installation of FlexWATCH NVR Player, you can playback the recorded video from FW-5400 series, or if you have recorded data in your PC, you can also playback the recorded video from your PC. (default ID:root, Password:root)

Please refer to Player User Manual for more detailed information.

3.4. "Admin" Menu

This menu is the administration menu for a user to manage all the functions of FlexWATCH and you need the administrator ID and Password for this menu.

Factory default Admin ID is "root" and Password is "root" and you can change the Password in Admin Menu. (Admin ID can't be changed.)

Please refer to FlexWATCH User Manual Part III for more detailed information.

FlexWATCH User Manual

Part 3

(Admin Menu of FW Web page)

Version 3.0

www.intplus.es

www.flexwatch.es

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1. Admin Menu

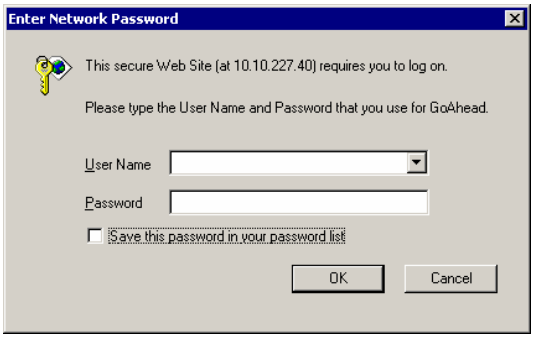
Admin menu is for the administrator of FlexWATCH® Server. The administrator can manage the FlexWATCH® Server by this Admin menu. To access to Admin menu, you need to have Admin ID & Password. Factory default is “root” (Admin ID)/”root” (Admin Password). You can change the Admin password in Admin Menu.

1.1. Access to Admin Menu

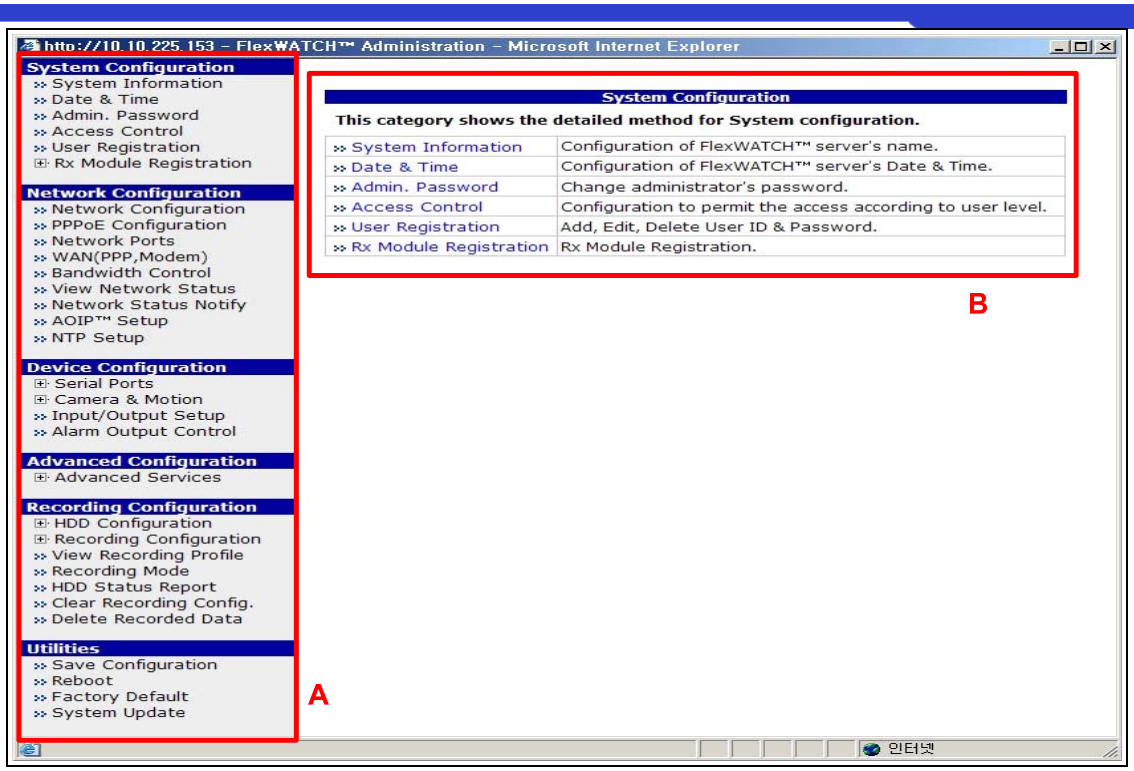
You can access to Admin Menu by following steps.

1. You can see the main page of FlexWATCH® Server by Web browser as below.

2. If you click Admin, you will be asked to enter ID & Password.


Enter Network Password
This secure Web Site (at 10.10.227.40) requires you to log on.
Please type the User Name and Password that you use for GoAhead.
User Name
Password
Save this password in your password list
OK
Cancel

3. Please enter default ID:root & Password:root if you access to Admin page for the first time. If you changed the Password, please enter the changed password to log in. Please notice that Admin ID can’t be changed.
   A. Configuration Menu in Admin Menu. There are System, Network, Device, Advanced, Recording, Utilities group menus.
   B. If you click group menu (System Configuration, Network Configuration, Device Configuration, Advanced Configuration, Recording Configuration, Utilities), you can see sub menu for each group menu.



1.2. Admin Menu Structure

Category	Main Menu	Level 1 Sub-Menu	Level 2 Sub-Menu
System Configuration	System Information	n/a	n/a
	Date & Time		
	Admin. Password		
	Access Permission		
	User Registration		
	Rx Module Registration	Rx Module 0 to 15	n/a
Network Configuration	Network Configuration	n/a	n/a
	PPPoE Configuration		
	Network Ports		
	WAN(PPP, Modem)		
	Bandwidth Control		
	View Network Status		
	Network Status Notify		
	AOIP™ Setup		
	NTP Setup		
Device Configuration	Serial Ports	Serial Input Mode Serial Output Mode Transparent Mode PTZ Mode Voice Mode	n/a
	Camera & Motion	Camera 1 Camera 2 Camera 3 Camera 4	n/a
	Input/Output name	n/a	n/a
	Alarm Output Control	n/a	n/a
Advanced	Advanced Services	Buffering Service	E-mail

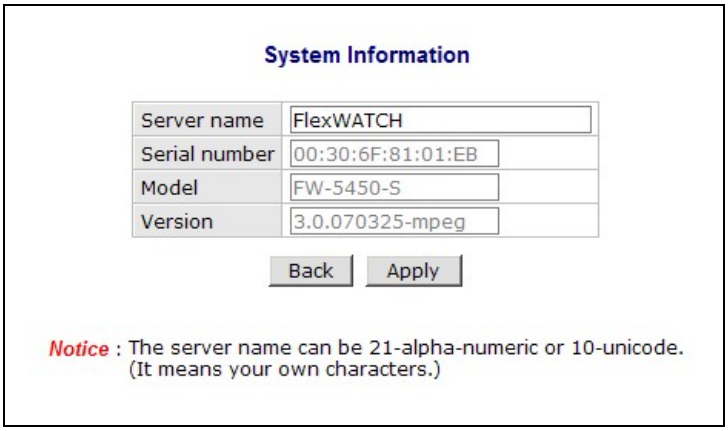
Configuration			FTP(Buffed) Alarm Buffering
		Non-Buffering Service	FTP(Periodic) Sensor Notification Alarm Output
Recording Configuration	HDD Configuration	HDD Format HDD Information	
	Recording Configuration	Server Module 0 Recording Configuration	Camera 1 Camera 2 Camera 3 Camera 4
	View Recording Profile	n/a	n/a
	Recording Mode		
	HDD Status Report		
	Clear Recording Config		
	Delete Recorded Data		
Utilities	Save Configuration	n/a	n/a
	Reboot		
	Factory Default		
	System Update		

2. System Configuration Menu

System configuration is to set up basic functions that help you properly run and manage the system. It is highly recommended to set up the configuration before any other configurations. This menu includes System Information, Date & Time, Administration account set up, Video relay management, and so on.

2.1. System Information

You can see current FlexWATCH® Server name, Serial number, Model name, and Firmware version.

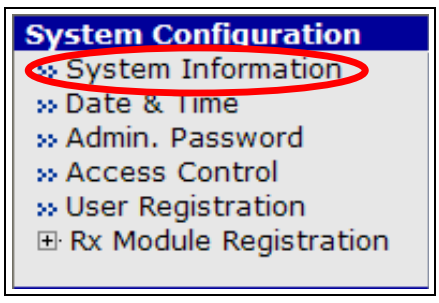


Following menu will be provided. You can change Server Name while the other information can't be changed.

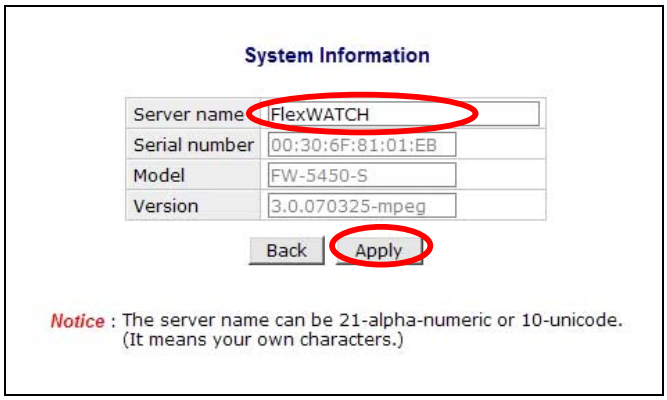
Server Name	FlexWATCH® Server Name. User definable and Identifier of the system when the system is accessed by third party program such as NDVR software**.**
Serial Number	FlexWATCH® Server Serial number(MAC Address).This information must be **submitted for RMA or Warranty claim**
Model	FlexWATCH® Server Model name. This information also needs to be submitted for **technical support request.**
Version	FlexWATCH® Server firmware version. This information also needs to be **submitted for technical support request.**

2.1.1. Server Name Configuration

1. Click "System Information" of System Configuration group.

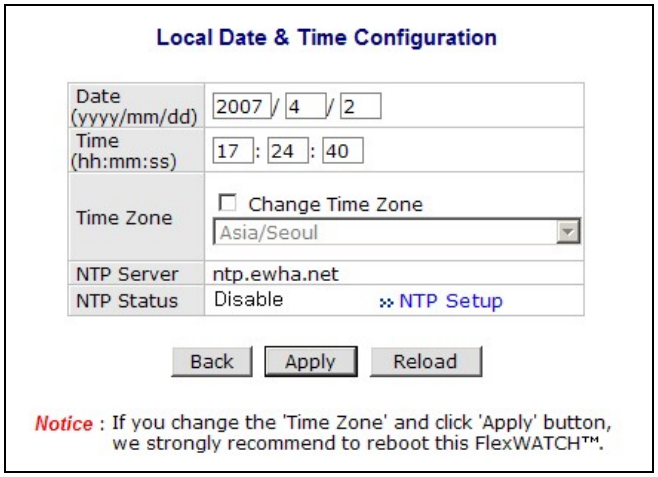


2. Please Input proper Server Name as you wish.
   A. Server name should be less than 21 alpha-numeric letters or 10 Unicode letters. You can't use Space, Tab, or special characters.
   B. Since Serial Number, Model, Version are read only, you can't change them.



3. After changing the server name, please click Apply button.

2.2. Date & Time



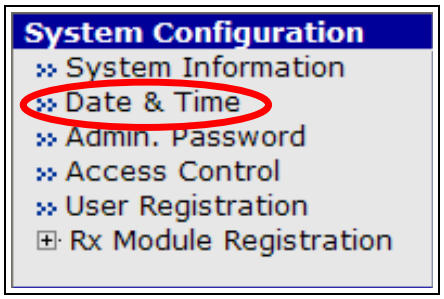
Date & Time Menu

Date (yyyy/mm/dd)	Current Date (year/month/day)
Time (hh:mm:ss)	Current Time (hour/minute/second)
Time Zone	Current Time Zone
NTP Server	Current NTP Server
NTP Status	If you click NTP Setup, you can check the current status of NTP Server. It will refresh the current server time with NTP server time once a day.

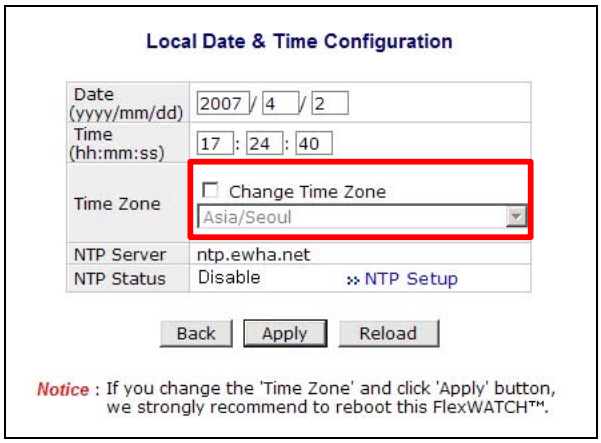
✓ NTP (Network Time Protocol) Server: provides you with exact date & time via Internet.

2.2.1. Date & Time Configuration

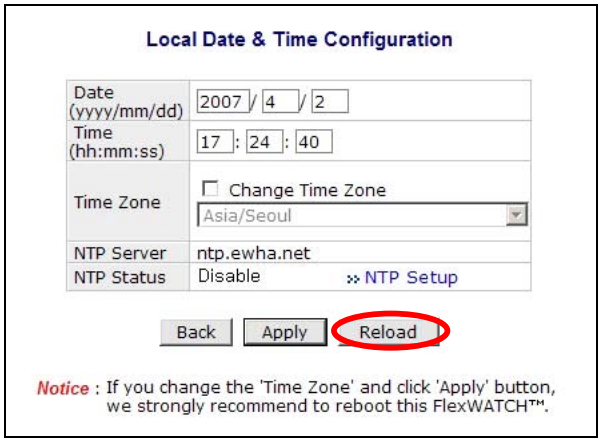
1. Click “Date & Time” of System Configuration group.



2. Please enter your desired Date and Time. In order to change Time Zone, please check on check box and click on list box. Then you can choose your desired Time Zone. (After the Time Zone change, please click Apply button and Reboot the FlexWATCH® server)



3. Without Time Zone change, if you click Apply button, then changed time will be applied to the system.
4. If you want to reload the time from FlexWATCH®, please click “Reload” button.



If you want to set current Date & Time by NTP Server, please click “NTP Setup”. Please refer to 3.9

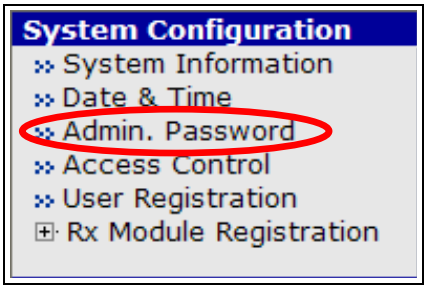
NTP Setup for more information.

2.3. Admin Password

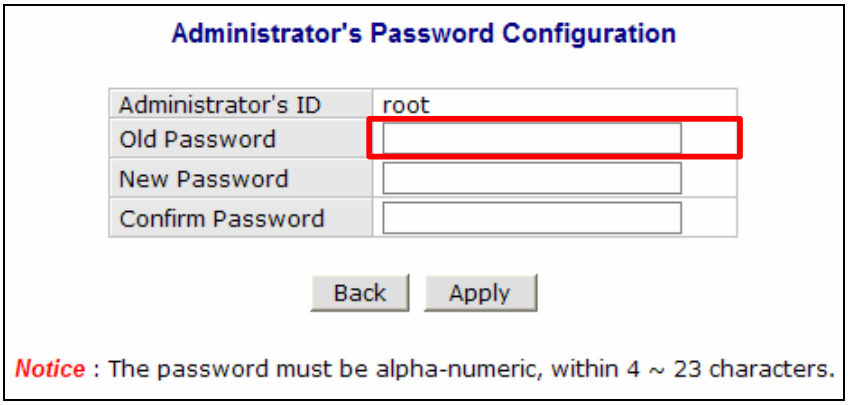
You can change the administrator's Password. Administrator ID is always "root".

2.3.1. Admin Password Configuration

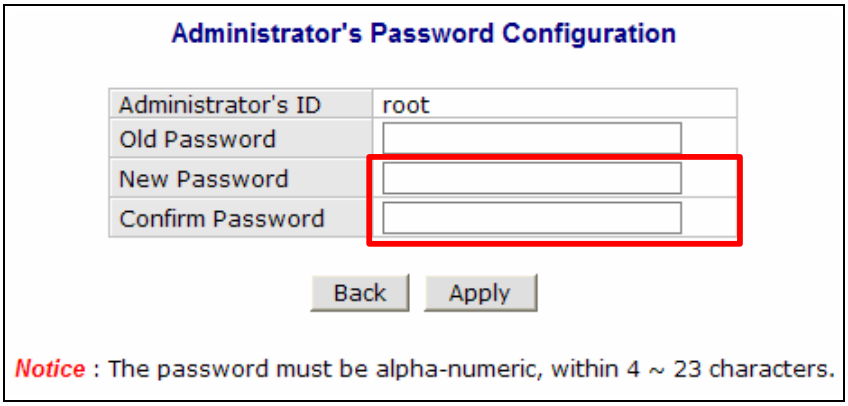
1. Click "Admin. Password" of System Configuration group.



2. Please input current Password in Old Password.



3. Input new Password in both New Password and Confirm Password. The Password shall consist of 4-23 alpha-numeric letters.

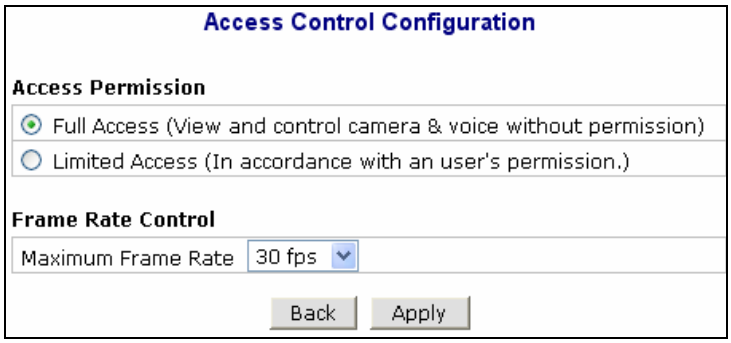


4. After the password change, please click Apply button. At this time, the new password will take

effect and the current connection to FlexWATCH® Server's Web Page will be disconnected. Therefore, you need to re-login with new Password.

2.4. Access permission

You can set up user accounts for the access to FlexWATCH® Server.

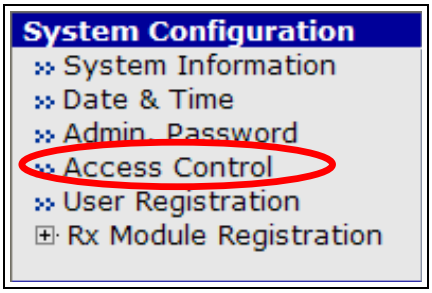


Access Permission Menu

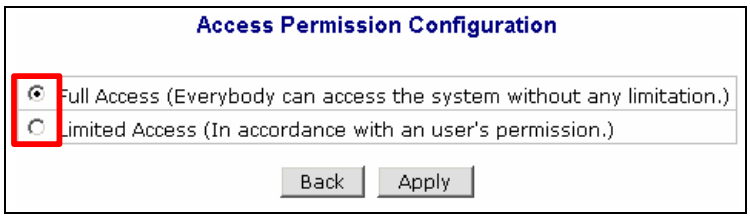
Full Access	To allow **system access by anyone** who knows the IP address. PTZ, Audio and Relay output device can be controlled by anyone. Thus, if security for video is important, it is highly recommended to user limited access mode below
Limited Access	To limit server access to the authorized user only. Through this mode, you can create multi level access accounts for each camera, not system level, with different control authority. Once Limited Access option is selected, User registration should be followed to effectively use Limited Access function.
Maximum Frame Rate	Available display rate for each channel of the FlexWATCH server. You can choose among 30,15,10,5,2 and 1. Frame rate for the display will be based on the chosen number. This function is only for M-JPEG mode.

2.4.1. How to set Access permission

1. Click "Access Control" of System Configuration group.



2. Please select either Full Access or Limited Access.


Access Permission Configuration
Full Access (Everybody can access the system without any limitation.)
Limited Access (In accordance with an user's permission.)
Back
Apply

3. Click Apply button to have the current setting to take effect.

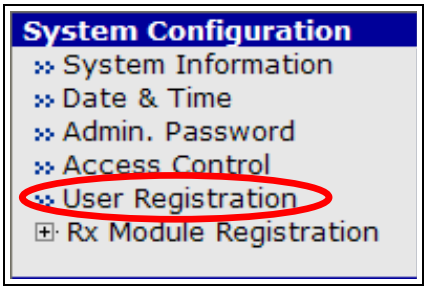
2.5. User Registration

You can register, edit and delete user accounts for FlexWATCH® Server. Registered users are valid only when Access Permission is selected as Limited Access.

2.5.1. Add

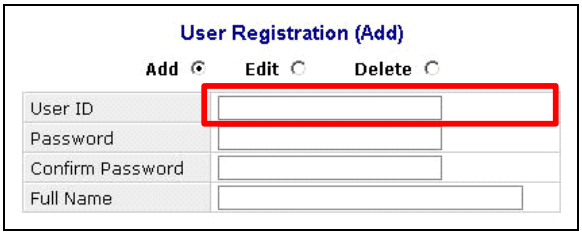
You can add a new user by entering user ID, Password, User Name and System Resource Access Permission.

1. Click “User Registration” of System Configuration group.

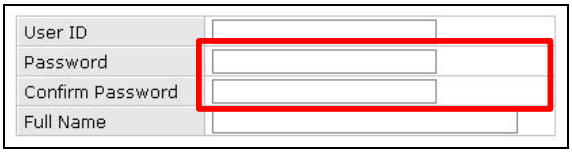


2. Select Add.

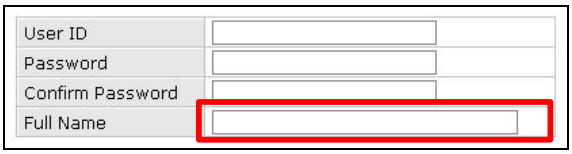
3. Input User ID in User ID field. User ID shall be less than 23 alpha-numeric letters.



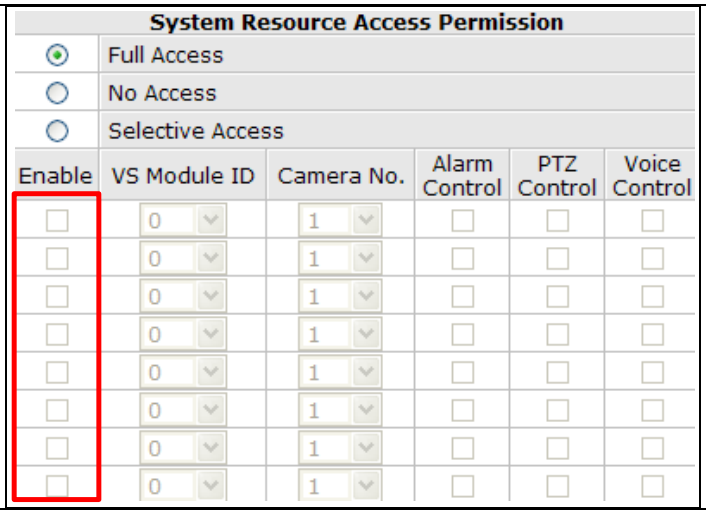
4. Please Input User password in both Password and Confirm fields. Password shall also be less than 23 alpha-numeric letters.

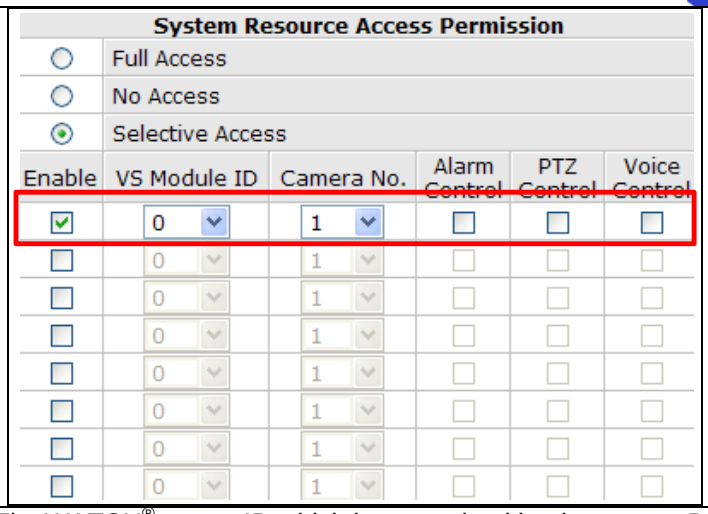


5. Enter User's name in Name field. You can enter less than 31 alpha-numeric letters or less than 15 other special letters.



6. Please choose the level of authority for the chosen user.

Full Access	If full access is selected, anybody can access the server and control the video except for Admin menu.
No Access	This is to temporally restrict camera access by specific user without deleting user account to temporally block access to the camera. The user can access to Live View but can't see video.
Selective Access	This is to give a user some limitation on cameras. Enable boxes will be activated.
	
Enable	You can select VS Module, Camera No, Alarm Control, PTZ Control, and Voice Control. By selecting each function, you can give a user some limitation of accessing FlexWATCH® Server.

	
VS Module ID	FlexWATCH® server ID which is recognized by the server. Default # is 0. Please disregard other VS Module ID appeared in the drop down menu. Other module numbers is for future use, which is not currently workable. However, VS Module 1 ~15 can be workable for NVR such as FW5xxx series since VS Module is for Network devices(Network Storage Server or NVS) connecting to NVR
Camera No	You can select Camera No for each VS Module (1~4 ch)
Alarm Control	To allow a user to control Alarm function
PTZ Control	To allow a user to control PTZ function (PTZ : Pan Tilt Zoom control)
Voice Control	To allow a user to control Audio function

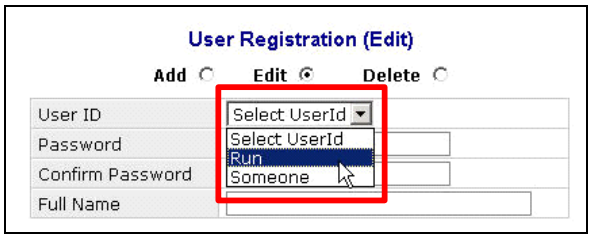
7. Please click Apply button.

2.5.2. Edit

You can edit the existing user's Password, name, level of authority. However, you can't change user ID. Editing procedure is similar to that of Add function.

1. Select Edit

2. Select User ID from the User ID list box.



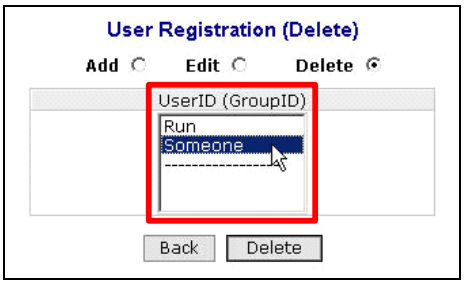
3. Please edit user password, level of authority and click Apply button.

2.5.3. Delete

You can delete the existing user's account.

1. Select Delete.

2. Select User ID from the User ID box.

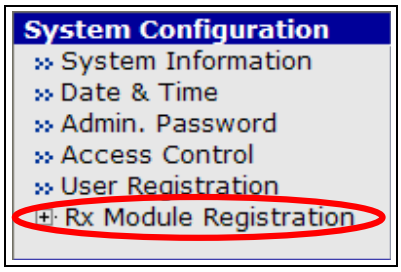


3. Click Delete button. Then the selected user account will be deleted

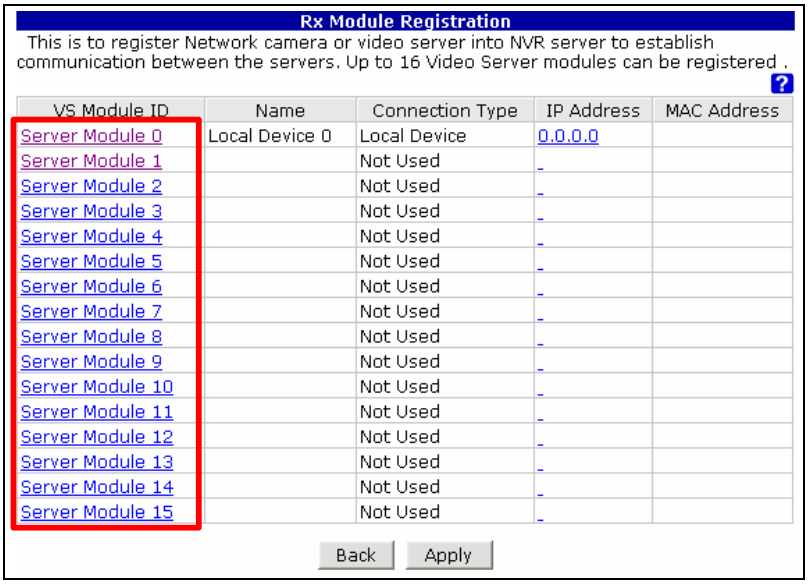
2.6. Rx Module Registration [FW-5450 Only]

You can register remote NVS (Network Video Server) or NCS (Network Camera Server) into NVR (Network Video Recorder; FW-5450, etc.) as remote channels by Rx Module Registration.

1. Click “Rx Module Registration” of System Configuration group.



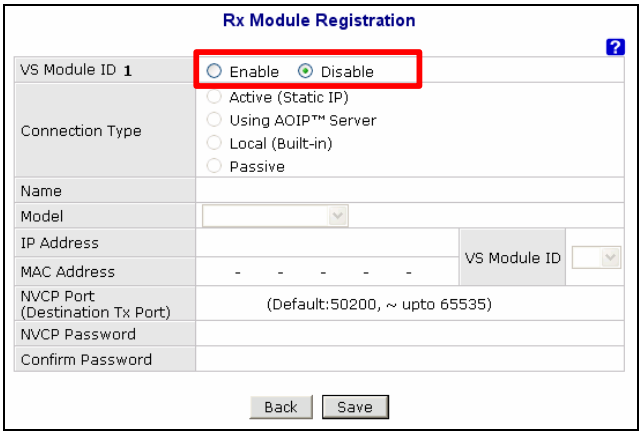
2. Please select one of Server Modules in the list and register desired FlexWATCH® Server. You can register up to 12 channels. For example, you can register up to 12 one channel servers while you can register up to 3 four channel servers.



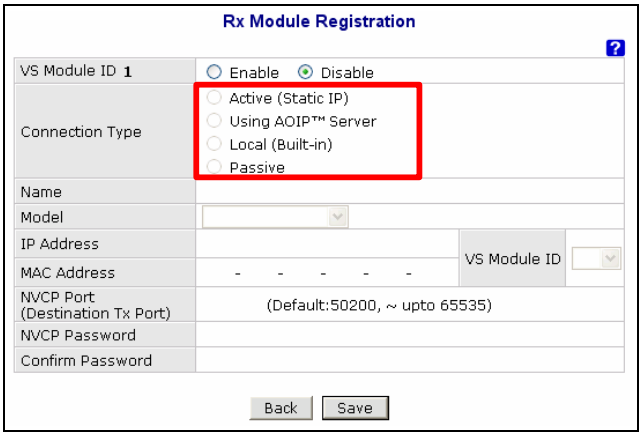
3. After addition of Server Module, please click Apply button.

2.6.1. Addition of Rx Server Module

1. Click any of Server Modules.
2. Please select Enable. Then all the other fields will be activated. If you don't want to use this VS Module, please select Disable.



3. Please choose proper Connection Type.



Active (Static IP)	In case of the server has static IP. Please enter IP address of the server.
Using AOIP Server	In case of the server has dynamic IP and the server is registered in AOIP server, which is provided for dynamic IP support. Please enter MAC address of the server to be registered.
Local(Built-in)	Local 4 channels of FW-5450. User can't change this.
Passive	When the server has dynamic IP and the FW5450 has static IP, please enter MAC address of the server to be registered.

4. Please input a server name in Name field. And select the right type of series of model. No specific model can be selected. Note that some series of model is not available right now such as 4200, 4600, 5800, etc. IP Address field will be activated when the Connection Type is Active (Static IP) whereas MAC Address field will be activated when the Connection Type is either Using AOIP Server or Passive.

Following is information about the series of FlexWATCH Models.

FW-1100 Series = FW-1100, FW-1110L, FW-1110LW, FW-1110, FW-1110D, FW-1110W, FW-1120, FW-1130, FW-1130W, FW-1131, FW-1132, FW-1150, FW-1160, FW-1160E, FW- 1160S, FW-1160SE, FW-1161S, FW1161SE.

FW-1200 Series = FW-1200

FW-1400 Series = FW-100A

FW-3100 Series = FW-200A, FW-3110, FW-3150

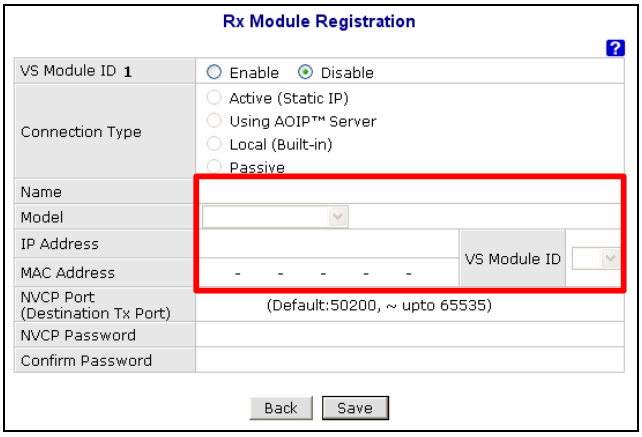
FW-3200 Series = FW-3210

FW-3400 Series = FW-3400, FW-3440, FW-3450

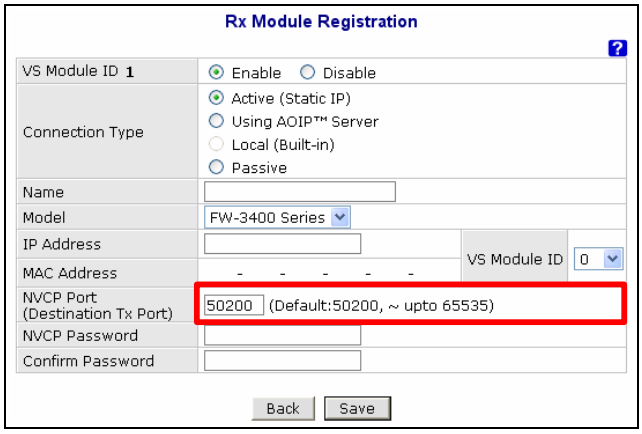
FW-3600 Series = FW-500A

FW-5000 Series = FW-5000, FW-5050

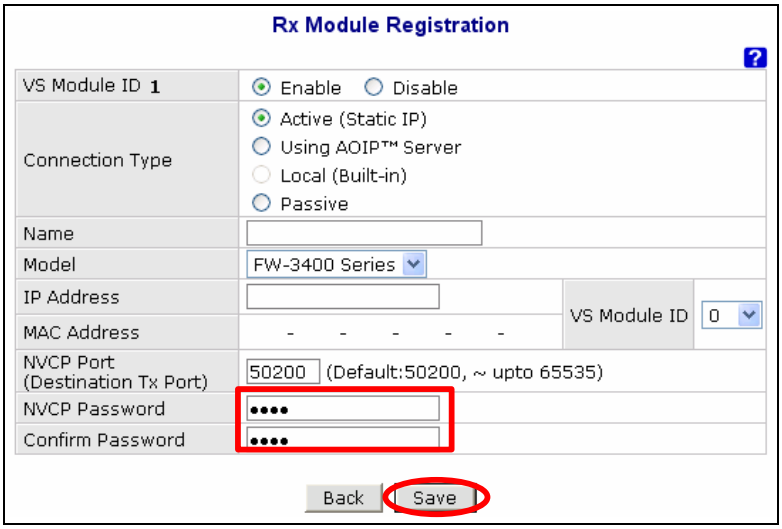
FW-5400 Series = FW-5440, FW-5450



5. NVCP Port (Destination Tx Port) should be the same as the service port number of remote NVS or NCS you are about to register here. Default value is 50200 and the value can be up to 65535. NVCP port field will only be activated when Connection Type is Active (Static IP).



6. VS Module ID is the number of the built-in module of NVS or NCS, which provides remote channels. VS Module ID is always 0(default value) for any 1, 2, or 4 channel server. If you select any other number, it won't work properly.
7. NVCP Password should be the same as that of remote NVS or NCS you are about to register here. The default NVCP password of FlexWATCH server is "nvcp".

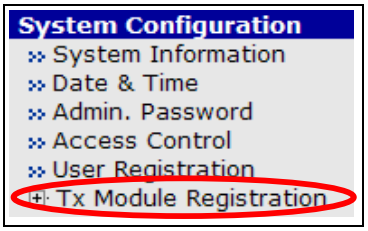


8. Once configuration is done, click ""Save" button. If you don't want to register it, please click "Back" button.
9. After Rx Module registration by "Save" button, please click "Apply" button to take effect.

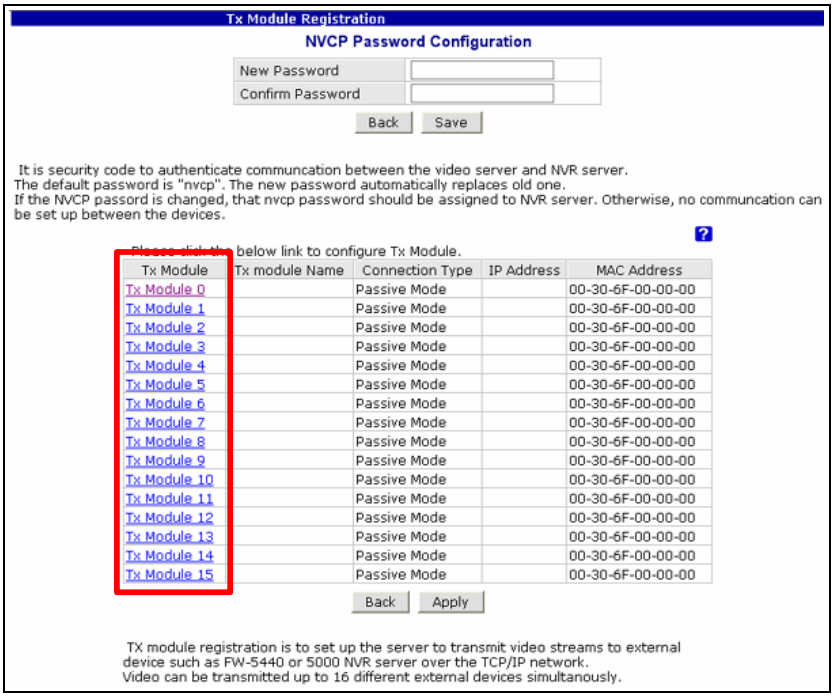
2.7. Tx Module Registration [FW-3450 & FW-1130 & FW-3150 Only]

Tx Module Registration is to provide NVR (Network Video Recorder; FW-5450, etc.) with remote channels from NVS (Network Video Server) or NC (Network Camera).

1. Please Click Tx Module Registration of System Configuration group.



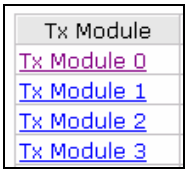
2. The total number of Tx Module is 16. Thus **Up to16 different NDVR servers** can simultaneously work with FlexWATCH server. Default setting for Tx Module is "passive", so if NVR's Rx Module is "active" the NVS can connect to NVR right away.
3. You can select one Tx Module and change it to "active".


Tx Module Registration
NVCP Password Configuration
New Password
Confirm Password
Back
Save
It is security code to authenticate communcation between the video server and NVR server.
The default password is "nvcp". The new password automatically replaces old one.
If the NVCP passord is changed, that nvcp password should be assigned to NVR server. Otherwise, no communcation can be set up between the devices.
below link to configure Tx Module.
Tx Module
Tx module Name
Connection Type
IP Address
MAC Address
Tx Module 0 Passive Mode 00-30-6F-00-00-00
Tx Module 1 Passive Mode 00-30-6F-00-00-00
Tx Module 2 Passive Mode 00-30-6F-00-00-00
Tx Module 3 Passive Mode 00-30-6F-00-00-00
Tx Module 4 Passive Mode 00-30-6F-00-00-00
Tx Module 5 Passive Mode 00-30-6F-00-00-00
Tx Module 6 Passive Mode 00-30-6F-00-00-00
Tx Module 7 Passive Mode 00-30-6F-00-00-00
Tx Module 8 Passive Mode 00-30-6F-00-00-00
Tx Module 9 Passive Mode 00-30-6F-00-00-00
Tx Module 10 Passive Mode 00-30-6F-00-00-00
Tx Module 11 Passive Mode 00-30-6F-00-00-00
Tx Module 12 Passive Mode 00-30-6F-00-00-00
Tx Module 13 Passive Mode 00-30-6F-00-00-00
Tx Module 14 Passive Mode 00-30-6F-00-00-00
Tx Module 15 Passive Mode 00-30-6F-00-00-00
Back
Apply
TX module registration is to set up the server to transmit video streams to external device such as FW-5440 or 5000 NVR server over the TCP/IP network.
Video can be transmitted up to 16 different external devices simultanously.

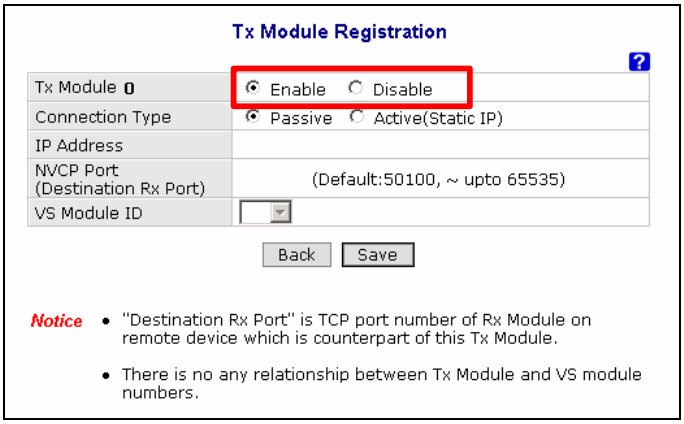
4. After Tx Module registration, please click “Apply” button so that the new configuration can take effect.

2.7.1. Tx Module Change

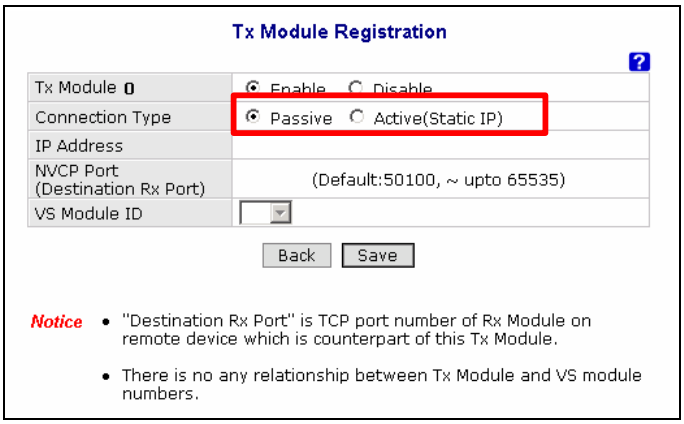
1. Please click one of Tx Module on the list.



2. Select Enable in Tx Module field. If you don’t want to use this module, please select Disable. The factory default is Enable.

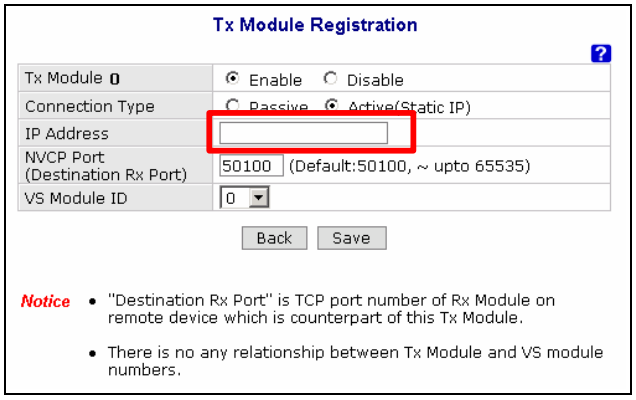


3. Select the Connection Type with NVR.

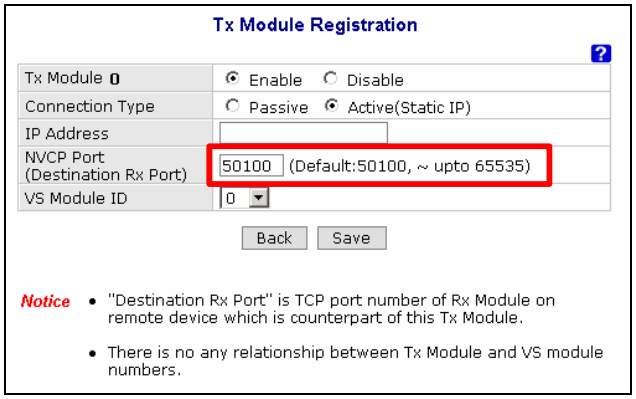


Passive	Factory Default value. You can select this when NVR with dynamic IP and this NVS with static IP. In this case, IP address and NVCP Port fields won't be activated.
Active (Static IP)	You can select this when NVR with static IP and this NVS with dynamic IP. Please enter IP address and NVCP port.

4. IP Address field will be activated when the Connection Type is Active (Static IP). You can enter IP address of NVR.



5. NVCP Port field will be activated only when Connection Type is “Active (Static IP)”. NVCP Port (Destination Rx Port) should be the same as the service port number of Rx Module of NVR. Default value is 50100 and the value can be up to 65535. NVCP port field will only be activated when Connection Type is Active (Static IP).



6. VS Module ID is the number of the built-in module of NVS or NCS, which provides remote channels. VS Module ID is always 0(default value) for any 1, 2, or 4 channel server. If you select any other number, it won’t work properly.
7. If you want change NVCP Password instead of default password “nvcp”, please enter new password in New Password and Confirm Password fields.

8. After the configuration is done, please click Save, otherwise please click Back button.
9. After Tx Module change, please click “Apply” button so that the new configuration can take effect.

3. Network Configuration

You can do general network configuration for FlexWATCH® Server and can check current setting values. Network configuration mode provides interface for the server to be connected to broadband network or PSTN line. In addition to basic network, application port such as HTTP, NVCP, Voice port configuration and IP filtering options are provided.

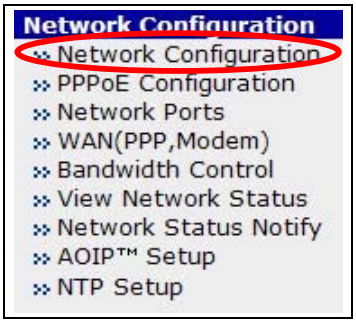
3.1. Network Configuration

You can configure the network settings in accordance with your network services such as Static IP, DHCP Client, PPPoE, etc. LAN port must be used for network configuration. You can consult ISP for more information.

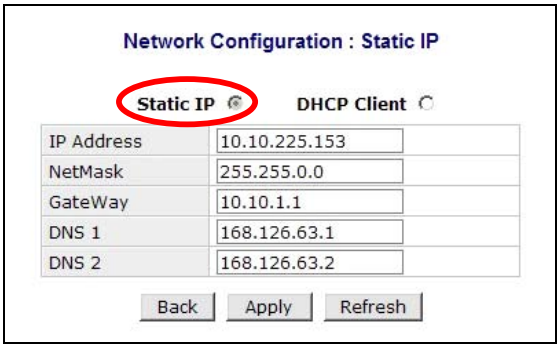
1. Static IP: you can use this configuration if you have a static IP address for a FlexWATCH server.
2. DHCP Client: you can use this configuration if you use DHCP service. For example, most ISPs' services (Cable modem or ADSL, VDSL) are DHCP type, under which you are assigned IP address automatically.
3. PPPoE: Some DSL or Cable Modem based ISP provides PPPoE based internet connection service. If FlexWATCH server must directly be connected to the external DSL or Cable modem, PPPoE option must be enabled. You need to enter ID & Password to connect to the Internet.

3.1.1. Static IP Configuration

1. Please click "Network Configuration" of Network Configuration group.



2. If you select Static IP, then you will be able to enter IP Address, Netmask, Gateway, DNS1, and DNS2.



3. Please enter proper values into IP address, Netmask, Gateway, DNS1 and DNS2 fields.
4. Click Apply button to save new setting values. If you click Reset, the values will be restored with old values. If you don't apply new settings, please click Back to go back to previous page.

3.1.2. DHCP Client Configuration

DHCP Client is selected as factory default.

1. Select DHCP Client under dynamic IP environment.

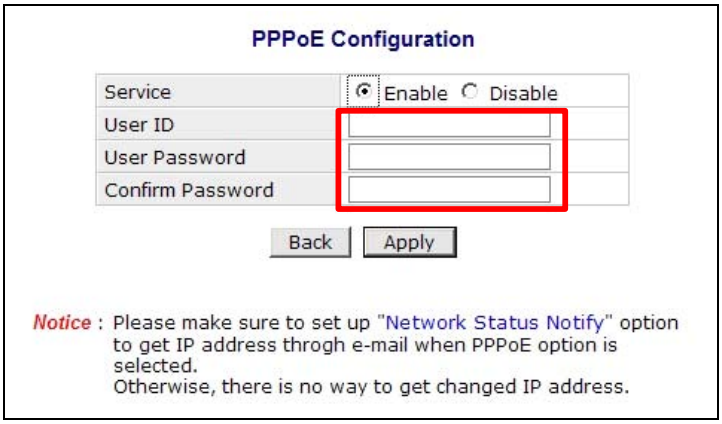
Network Configuration : DHCP Client
Static IP
DHCP Client
Back
Apply
Notice : Please make sure to set up "Network Status Notify" option to get IP address throgh e-mail when DHCP option is selected.

2. Click Apply button to save the current setting. Please click Back to go back to previous page.

3.2. PPPoE Configuration

Under PPPoE, you need to be authenticated by ID & Password to use Internet service.

1. When you click PPPoE, you can enter User ID, User Password, confirm Password.


PPPoE Configuration
Service
Enable
Disable
User ID
User Password
Confirm Password
Back
Apply
Notice : Please make sure to set up "Network Status Notify" option to get IP address throgh e-mail when PPPoE option is selected.
Otherwise, there is no way to get changed IP address.

2. Please enter your ID & Password provided by your ISP.
3. Enter your Password again in Confirm Password field.

Please click Apply button to save new setting values. If you don't apply new settings, please click Back to go back to previous page.

3.3. Network Ports

You can enter various Port numbers, which are used by FlexWATCH® Server, in order to communicate with Client PC. Currently FlexWATCH® Server uses HTTP Port, NIPP Port, NVCP-Rx Port, and Audio Port.

3.3.1. HTTP Port

1. HTTP Port is used for Web communication between Client PC and FlexWATCH® Server. By assigning different HTTP port number for each server and configure port-forwarding feature of Router, you can install more than one server behind the router. For more information about this, please contact your local vendor.
2. Default value is 80 and it can be up to 65535.

☞ ** If HTTP Port number is changed, you should enter HTTP Port number with your IP address in URL section of Web browser.*
(ex. If FlexWATCH® Server IP address is 192.168.1.100 and HTTP Port: 8080, then it should be like http://192.168.1.100:8080)

3.3.2. NIPP (Network Image Provider Protocol) Port [FW-5450 Only]

1. This is a port through which archived video can be playback through Internet. If NIPP Port is not open to Internet no recorded video can be played back.
2. Default value is 50000 and can be between 10000 and 65535.

3.3.3. NVCP-Rx (Network Video Control Protocol) Port [FW-5450 Only]

1. Rx port is a TCP port number through which NVR server can communicate with FlexWATCH® server so that video can be transmitted into NVR server.
2. Default value is 50100 and can be between 10000 and 65535.
3. Active mode: NVR actively connects to other FlexWATCH® Servers on the network and receives data from them.

3.3.4. NVCP-Tx (Network Video Control Protocol) Port [FW-3450 & FW-1130 & FW-3150 Only]

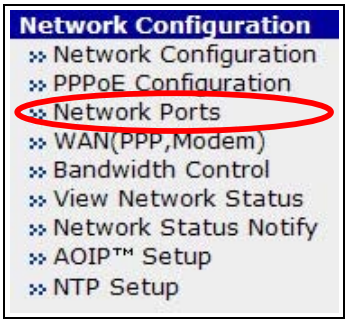
1. Tx port is a TCP port number through which FlexWATCH server can communicate with other devices such as FW-5440 or FW-5000 NVR servers.
2. Default value is 50200 and can be between 10000 and 65535.
3. Passive mode: Other FlexWATCH® Servers on the Network connect to your NVS and they receive data from your NVS.

3.3.5. Audio Port

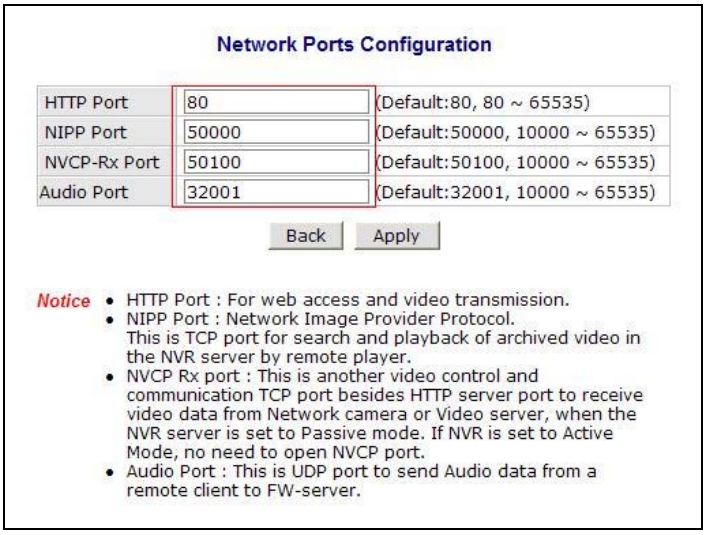
Audio Port is a network port that gets audio input from user's PC and sends out to audio out port of FlexWATCH® Server. The default value is UDP 32001 and can be between 10000 and 65535.

3.3.6. Network Ports Configuration

1. Click “Network Ports” of Network Configuration group.



2. Please enter HTTP Port, NIPP Port, NVCP-Rx Port and Audio Port.


Network Ports Configuration
HTTP Port 80 (Default:80, 80 ~ 65535)
NIPP Port 50000 (Default:50000, 10000 ~ 65535)
NVCP-Rx Port 50100 (Default:50100, 10000 ~ 65535)
Audio Port 32001 (Default:32001, 10000 ~ 65535)
Back
Apply
Notice
HTTP Port : For web access and video transmission.
NIPP Port : Network Image Provider Protocol. This is TCP port for search and playback of archived video in the NVR server by remote player.
NVCP Rx port : This is another video control and communication TCP port besides HTTP server port to receive video data from Network camera or Video server, when the NVR server is set to Passive mode. If NVR is set to Active Mode, no need to open NVCP port.
Audio Port : This is UDP port to send Audio data from a remote client to FW-server.

3. Click Apply button to save new setting values.

3.4. WAN-Modem

Server is designed to make a call to ISP or can receive a call from outside so that server can establish Internet connect to send FTP, e-mail or send video & data through PSTN line or other medium. This is best alternative when the broadband Internet access is not available. You will have a PSTN modem installed for FlexWATCH® to establish PPP connection through PSTN modem. The network interface through PPP connection will work as WAN port.

3.4.1. PPP Server (Dial-In)

This mode is that FlexWATCH® works as a PPP Server. There will be a call from a client PC to FlexWATCH® and FlexWATCH® will receive the call to establish the PPP connection.

1. Local IP Address will be assigned to FlexWATCH® and Remote IP Address will be assigned to the other party's device. Therefore, if Client PC makes a call to FlexWATCH®, FlexWATCH® gets the Local IP Address whereas Client PC gets the Remote IP Address.

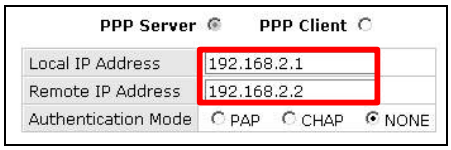
Local IP address:

System default IP address **(192.168.2.1)** resides in the FlexWATCH® server for **modem connection** only. So when you connect the FlexWATCH® server from remote PC using dial-up networking and physical connection is made, you need to run your web browser and enter this system default IP address **(192.168.2.1)** to view live video. You can change this system default IP address as well. But it is recommended not to change system default IP address for modem connection to prevent any possible error.

Remote IP address:

IP address which is automatically given to remote client PC by FlexWATCH® server when FlexWATCH® server is connected by remote client PC using dial-up networking. This IP address (**192.168.2.2**) is for data communication between FlexWATCH® server and Remote client PC. So **you do not need to change this IP address**. But if you change default IP address of FlexWATCH® server (**192.168.2.1**) for modem connection to different class of IP address, you need to change remote IP address to the same class of IP to match the IP class.

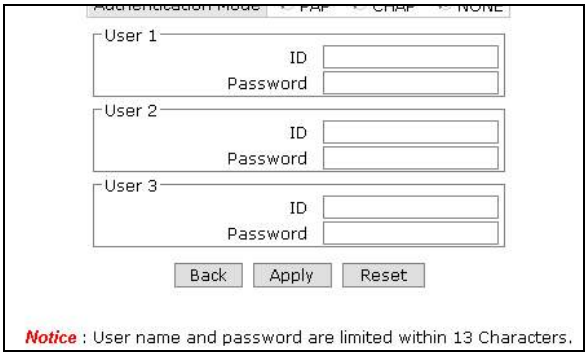
Notice) Note that when Local IP address is change, remote IP address should be changed into the same class of the IP address.



2. You can select Authentication Mode among PAP, CHAP, or None

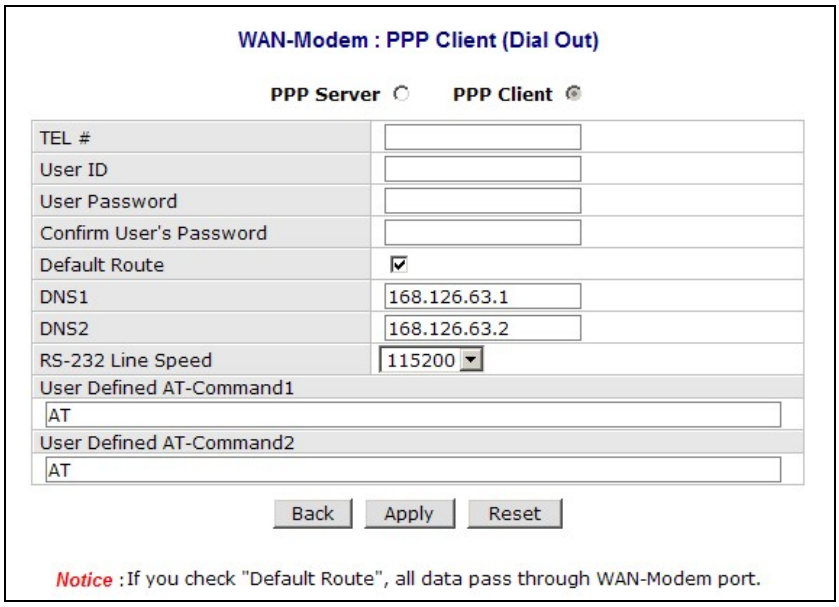
PAP	Connection is made by User ID & Password registered below sections.
CHAP	With User ID, Password, it applies another encryption method for higher security.
NONE	Do not use authentication mode.

3. In order to use PAP or CHAP authentication mode you need to register at least one user. You can register up to 3 users for this service.



3.4.2. PPP Client (Dial-Out)

This mode is that FlexWATCH® works as a PPP Client. You can connect to the Internet or other PPP Server through the Modem installed at FlexWATCH® (RS-232).

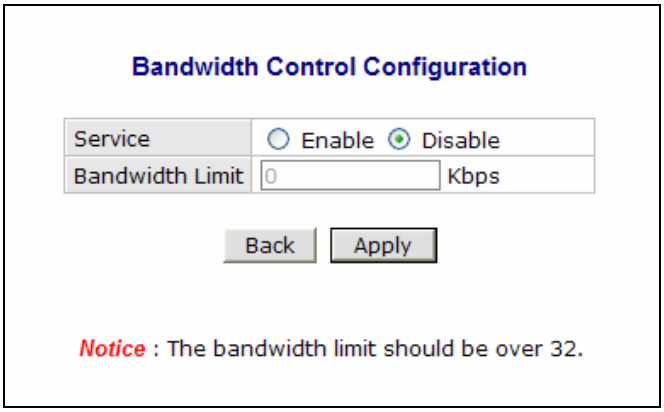


1. Please select “PPP Client” in “WAN (PPP, Modem)” menu.
2. Enter Telephone number in PPP Server field.
3. Enter User ID provided by ISP.
4. Enter User Password provided by ISP.
5. Enter DNS Server IP recommended by ISP.
6. Enter AT command for initializing the communication. (Initializing command is normally ‘AT’. But it may sometimes vary based on modems. Please refer to the modem manual for the recommended command for your modem.)

☞ *‘3COM U.S.Robotics 56K’ modem is recommended.*

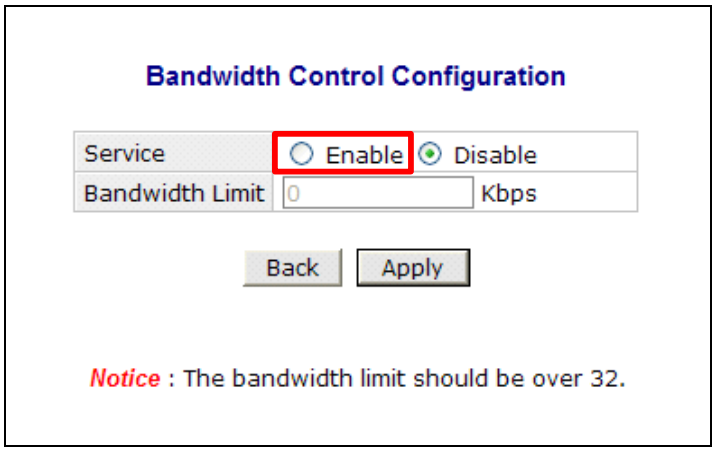
3.5. Bandwidth Control

You can control the bandwidth for FlexWATCH® Server. If out-going data is more than network bandwidth limit, FlexWATCH® will throw away some network data packets.

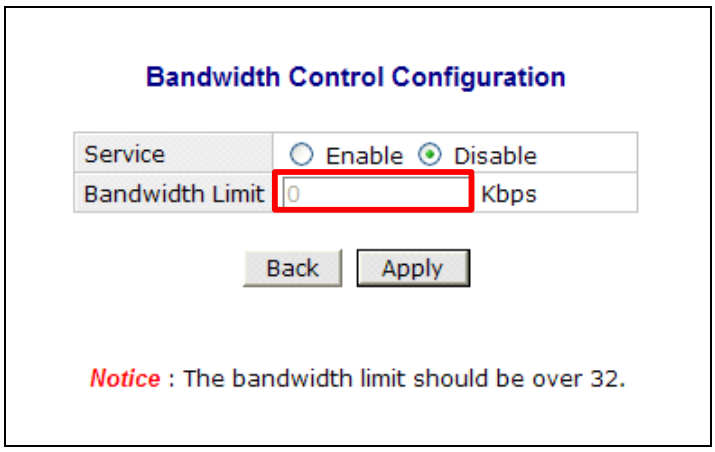


3.5.1. Bandwidth Control Configuration

1. Please specify whether you use Bandwidth control or not. If you want to use Bandwidth Control, please select Enable.



2. Please input Bandwidth Limit in kbps. This function supports both M-JPEG & MPEG4.



In MPEG4, you might see unstable video streams due to Packet loss, it is strongly recommended

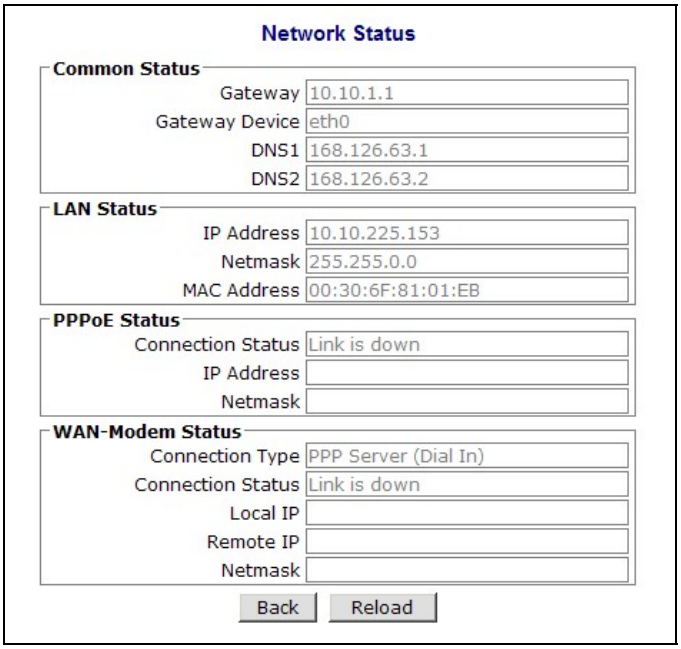
that you use CBR and frame rate control to control data transmission instead of Bandwidth control. This function is recommended for M-JPEG.

☞ *This Network Bandwidth control may cause to slow down the access to admin page of FlexWATCH server.*

3. Click Apply button to save the new value of the bandwidth limit.

3.6. View Network Status

You can view the current values of Network settings for FlexWATCH® Server.

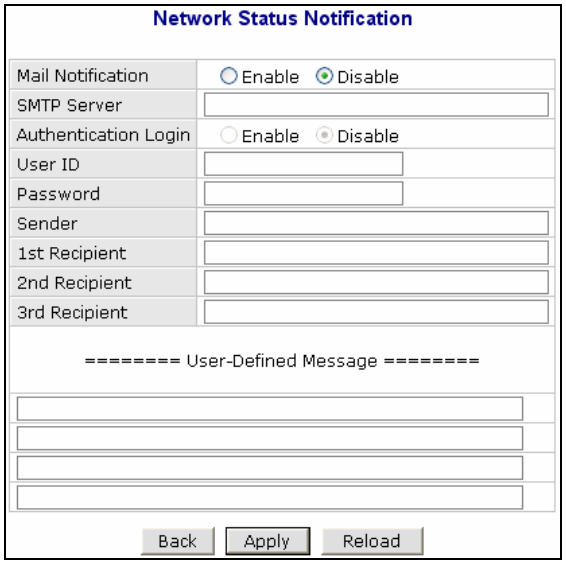


If you click Reload button, current setting values will be reloaded.

3.7. Network Status Notify

If network setting of FlexWATCH® Server is changed, E-mail is automatically sent to the recipient. When you select Enable for Mail Notification, under the following situations, FlexWATCH Server will send e-mails of current network settings to pre-registered recipients.

- **When the server is connected to PSTN Modem connection with Dial-up to ISP by event**
- **When the DHCP option is selected**
- **When the PPPoE option is selected**

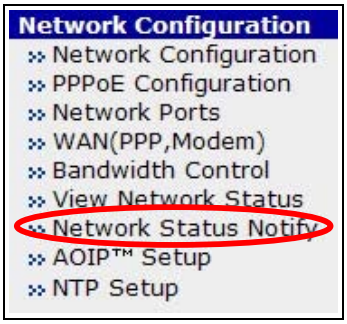


Network Status Notification Menu

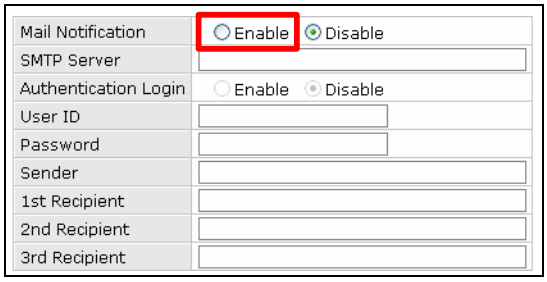
Mail Notification	Enable : using E-mail Disable : not using E-mail
SMTP Server	SMTP Server address
Authentication Login	Select whether you use Authentication login or not
User ID	User ID for Authentication Login
Password	User Password for Authentication Login
Sender	Sender's E-mail address
Recipient1's Email Address	Recipients' E-mail addresses (Max. 3 Recipients)
Recipient2's Email Address	
Recipient3's Email Address	
User Defined Message	User defined message attached to E-mail

3.7.1. Network Status Notify Configuration

1. Click "Network Status Notify" of Network Configuration group.

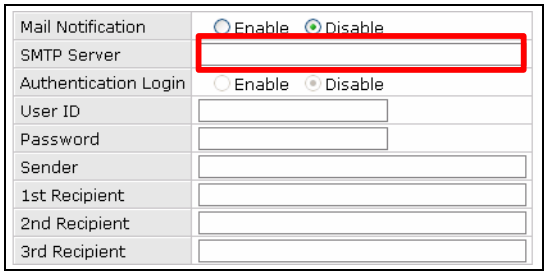


2. Select Enable if you want to use Mail Notification function.

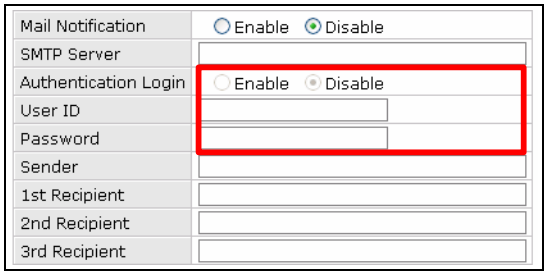


3. Enter address of SMTP Server.

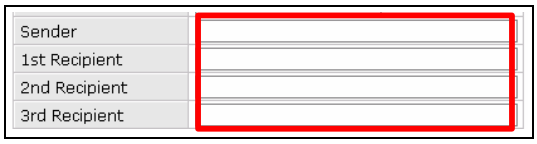
✓ SMTP Server gets sender's e-mail and relays it to recipients.



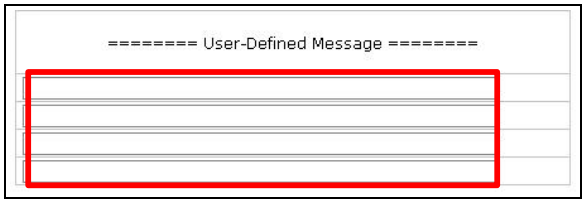
4. Select Enable for Authentication Login and please enter User ID & Password provided by SMTP server.



5. Enter Sender's e-mail address in Sender field and Recipients' e-mail address in Recipient field. You can enter up to 3 recipients.



6. Enter User Defined Message, which will be attached the notification e-mail.



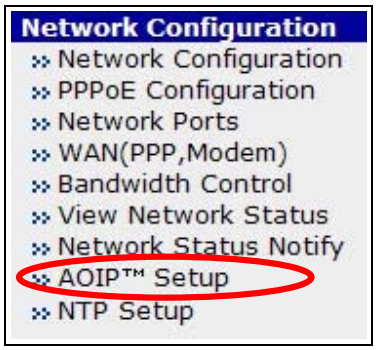
7. Click Apply button to save new setting values. Reload button will restore the previous values.

3.8. AOIP™ Setup

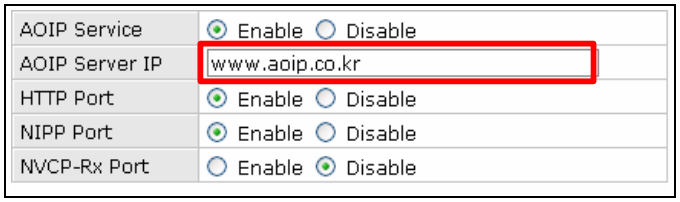
AOIP (Always-On-IP) is an IP gateway through which user can access the FlexWATCH server when it is connected to Dynamic IP address. Thus, if the server should be connected to the Dynamic IP network and you want to view live video from anywhere, it is the right solution for you. First, you need get a User account provided by supplier. Secondly, you need to configure your FlexWATCH server to be registered at AOIP server by AOIP™ Port Setup.

3.8.1. AOIP™ Configuration

1. Click AOIP™ Setup of Network Configuration group. .

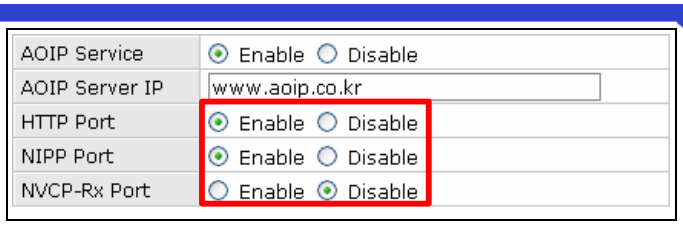


2. Select Enable in AOIP Service.
3. Please enter the address of AOIP™ Server, in which your account is registered. For example, if you use AOIP™ Server in Korea provided by Seyeon Tech Co., Ltd., you may enter www.aoipspain.com . If your local supplier runs their own AOIP™ Server, you shall enter the address of their local AOIP™ Server.



✓ The address of AOIP™ Server in Spain is www.aoipspain.com .

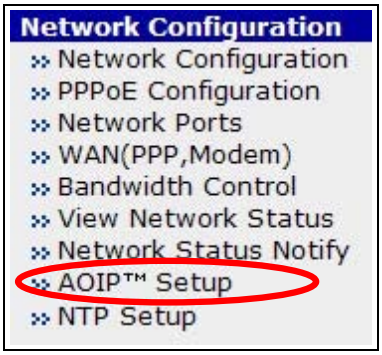
4. Select which ports you want to use.



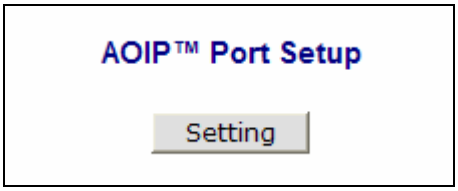
5. Please click Apply button to save new settings.

3.8.2. AOIP™ Port Setup

1. Click AOIP™ Setup of Network Configuration group.

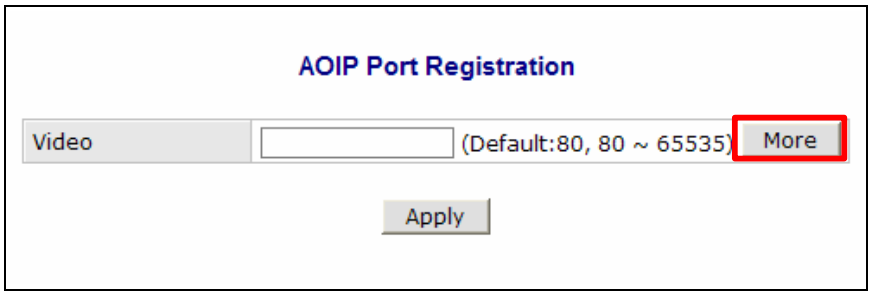


2. Click Setting Button in AOIP™ Port Setup.

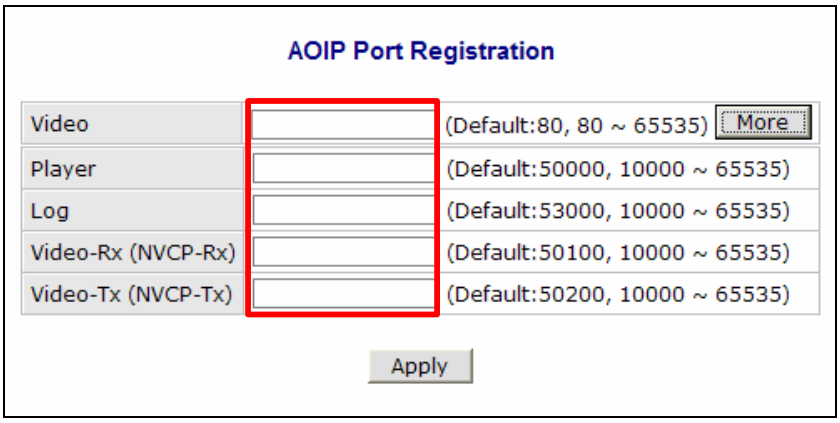


3. Please enter your AOIP user ID & password in pop-up window.

4. Please Click More button for more ports to be set.



5. Enter the port number you want to use for each service port.



6. Click Apply button to save new setting values

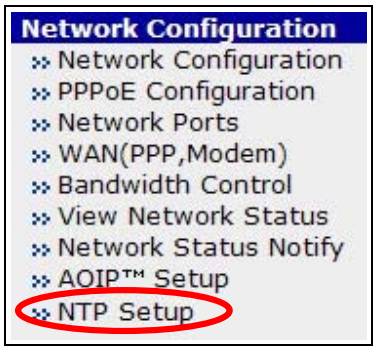
This AOIP Port Registration can also be done in AOIP ™ Server. AOIP ™ Server provides you with Registration, Search, Delete, Edit service, etc.

3.9. NTP Setup

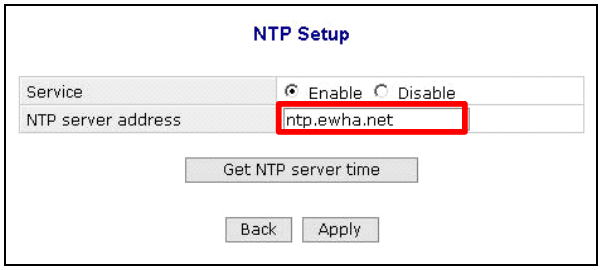
FlexWATCH® Server can get time information from a NTP server and FlexWATCH® Server can be set by that time.

3.9.1. NTP Setup Configuration

1. Click “NTP Setup” in Network Configuration group.



2. If Service is selected as Enable, FlexWATCH® server will synchronize its time with acquiring time from Time Server when booting. Please enter the address of a Time Server in NTP Server address field.



3. If you want to set FlexWATCH® server time manually with acquiring time from Time Server, please click 'Get NTP Server time'. You can check out the changed time in Date & Time menu in System Information group.
4. Click Apply button to save new setting values.
5. If NTP service is enabled, FlexWATCH® server time will be synchronized with time from NTP Server once a day.

3.9.2. FlexWATCH® Server Time

In general, most cases of OS, when booting, its time needs to be set. So does Linux. There are two ways of getting current time. First one is by system's RTC and the other one is by Time Server via network.

RTC time itself has some inaccuracy, meaning that as time goes by, the inaccuracy will be bigger. However, acquiring time from Time Server is more accurate than RTC time even though there may be some inaccuracy due to network latency. FlexWATCH® server provides you with these two ways of setting its time.

3.9.2.1. Daylight Saving Time

If you use FlexWATCH® Server in a country where Daylight Saving time applies, please select Change Time Zone and change the time zone to that area. Then

3.9.2.2. UTC & Local Time

UTC (Universal Time) means the standard time while local time means your local area time. The internal time of Linux is in UTC and this UTC will be converted to local time based on Time Zone.

3.9.2.3. NTP

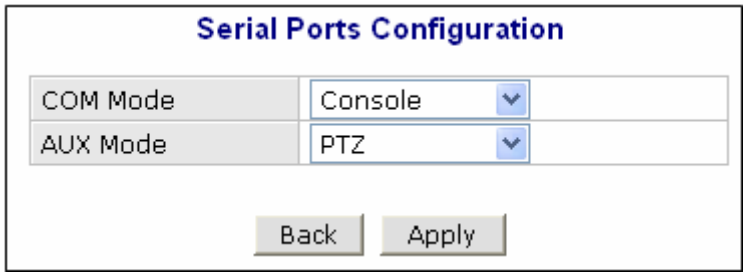
The acquiring time from NTP server is UTC. FlexWATCH server converts this UTC to local time by Time Zone. Thus NTP server which is not from your local area can be used for NTP service. However, there may be some network latency in case that you use a NTP server in long distance.

4. Device Configuration

You can configure camera related settings for FlexWATCH®.

4.1. Serial Ports

Basically COM port is for Console and AUX is for PTZ; however, they can be used for other functions.



Please click below link to configure more details.

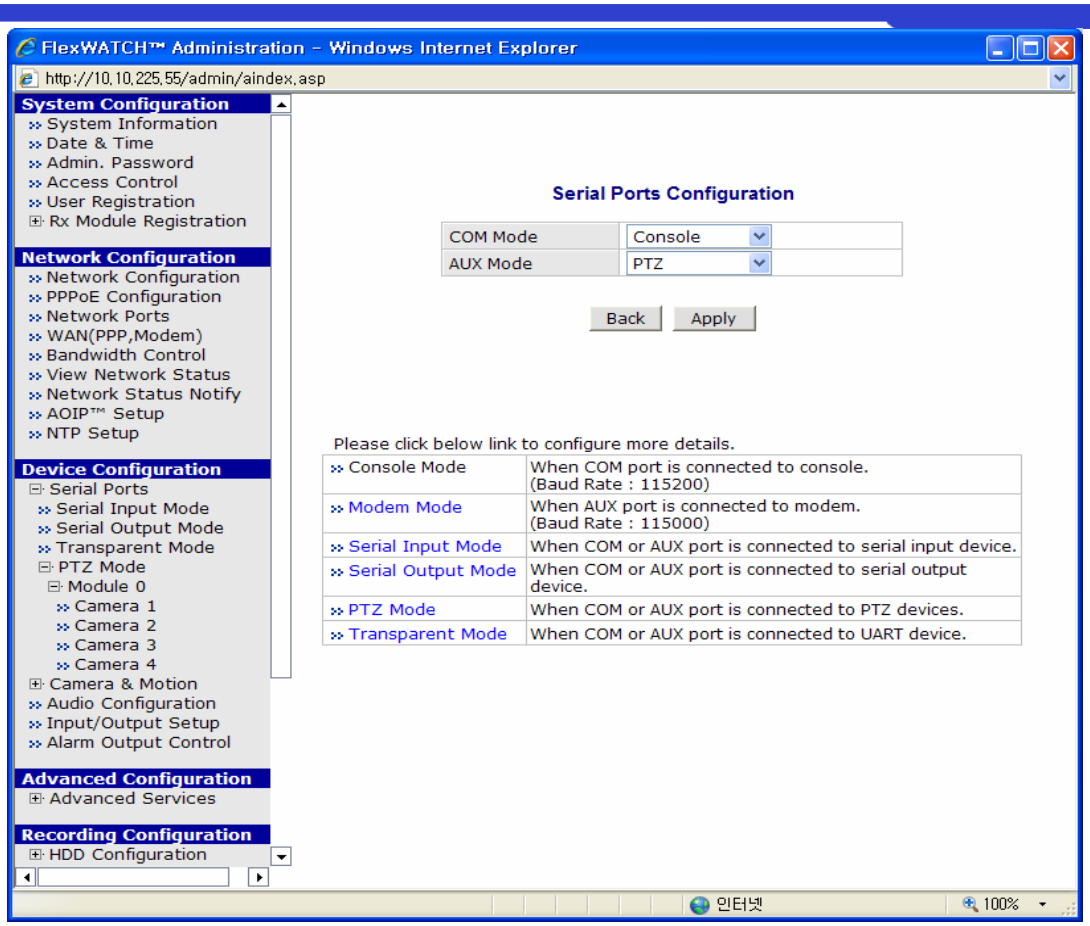
» Console Mode	When COM port is connected to console. (Baud Rate : 115200)
» Modem Mode	When AUX port is connected to modem. (Baud Rate : 115000)
» Serial Input Mode	When COM or AUX port is connected to serial input device.
» Serial Output Mode	When COM or AUX port is connected to serial output device.
» PTZ Mode	When COM or AUX port is connected to PTZ devices.
» Transparent Mode	When COM or AUX port is connected to UART device.

4.1.1. Serial Input Mode

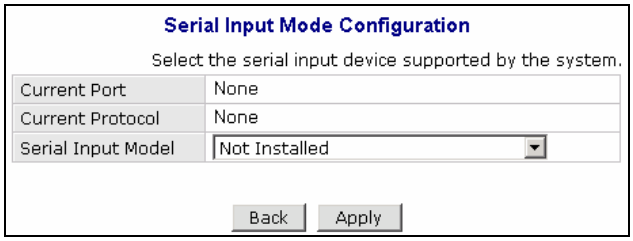
Serial Input Mode is for getting inputs from various sensors through AUX port of FlexWATCH® Server and sending you Camera's images by E-mail, FTP or Alarm Output. For example, when the water level of a dam reaches the specific level, FlexWATCH Server can send you the image of the water level. Or after checking the speed of cars on highway, if it reaches the speed limit, FlexWATCH server can send the image of car plate number to you. These kinds of functions can be managed by COM and AUX ports.

1. Serial Input Mode configuration

In web Admin page, please go to Device Configuration group. And click Serial Ports and select Serial Input in COM Mode. Click Apply button.



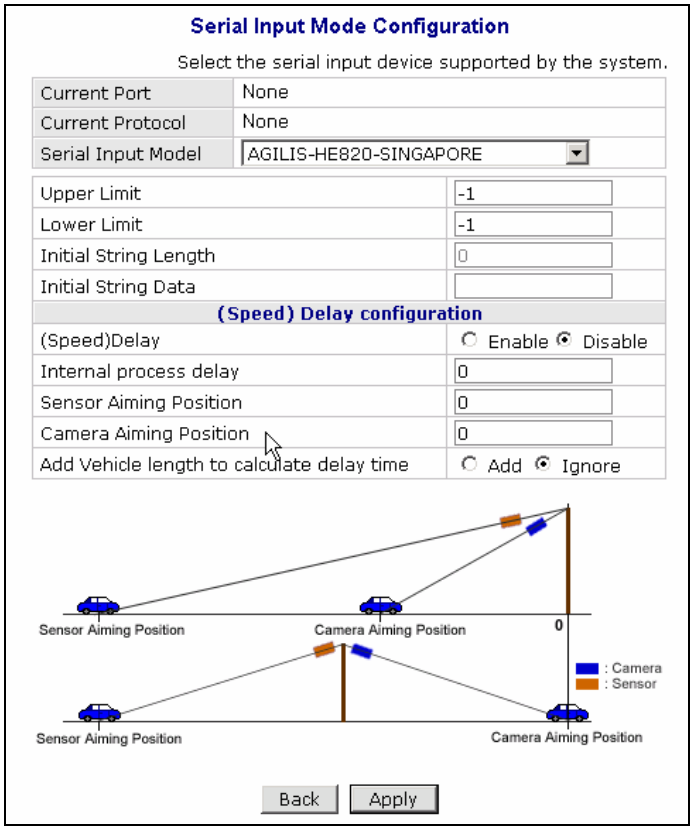
2. When you click Serial Input Mode, you will see below menu.



- Current Port: current port number will appear.
- Current Protocol: current protocol will appear.
- Serial Input Model: Please Select Model name for Serial Input mode.

Below is the screen for Speed sensor AGILIS-HE820-SINGAPORE model.

☞ *Serial Input device protocol can separately be uploaded into the system per customer needs. User can upload serial input device protocol file which is provided by manufacturer only. This function is not for general use. Thus, if you need more close information about this, please contact your local distributor or manufacturer for further information, sales@flexwatch.com.*



- Upper Limit: Maximum value
- Lower Limit: Minimum value
- Initial String Length: Initial string length of Sensor
- Initial String Data: Initial string data of Sensor
- (Speed)Delay: Delay enable/disable selection for sensor input
- Internal process delay: Value of sensor input delay
- Sensor Aiming Position: Value of Sensor Aiming Position
- Camera Aiming Position: Value of Camera Aiming Position
- Add Vehicle length to calculate delay time: Vehicle length add/ignore selection

4.1.2. Serial Output Mode

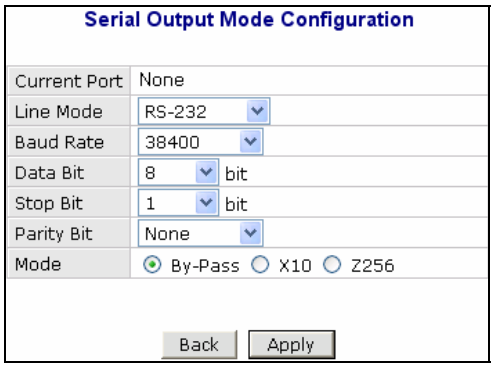
The system supports to relay third party command to target device through Serial output device control mode. Through this, user defined message can be reached to target device.

The system supports two different modes. One is X10 protocol for PLC (Power Line Communication) and UART (Universal Asynchronous Receiver Transmitter) device.

By using Serial Output Mode, you can send UART (Universal Asynchronous Receipt and Transmission) device commands to FlexWATCH® Servers. FlexWATCH® can control PTZ devices,

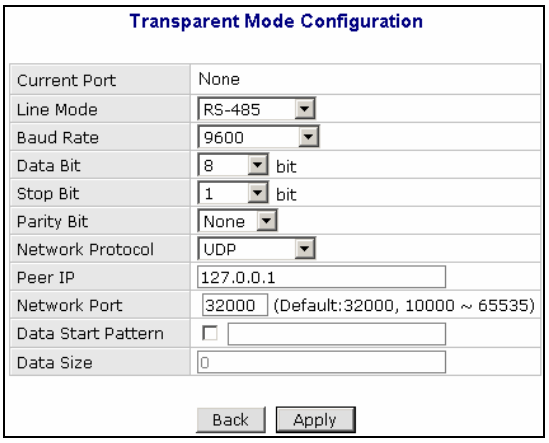
Multiplexer, Access control box, X10 Protocol, z256 protocol, etc. by RS-232 or RS-485(422) communication.

You can use By-Pass, X10, and Z256 in Serial Output Mode.



4.1.3. Transparent Mode

If you use Transparent Mode, you can use 2 FlexWATCH® servers to relay the signal from one UART device to another UART device. It is like direct communication between two UART devices. .



- Line Mode: Communication protocol
- Baud Rate: Communication rate
- Data Bit: Data bit size
- Stop Bit: Stop bit size
- Parity Bit: Parity bit type
- Network Protocol: Network Protocol type for data transmission
- Peer IP: IP of the other connected FlexWATCH server
- Network Port: Network Port number to be used
- Data Start Pattern: Data Start pattern selection. If you don't want to use, uncheck it.
- Data Size: Data size to be transmitted. If you don't use, do not enter a value.

4.1.4. PTZ Mode

PTZ (Pan/Tilt/Zoom) device connected to the server can be controlled through either standard web browser or specific application program over IP network.

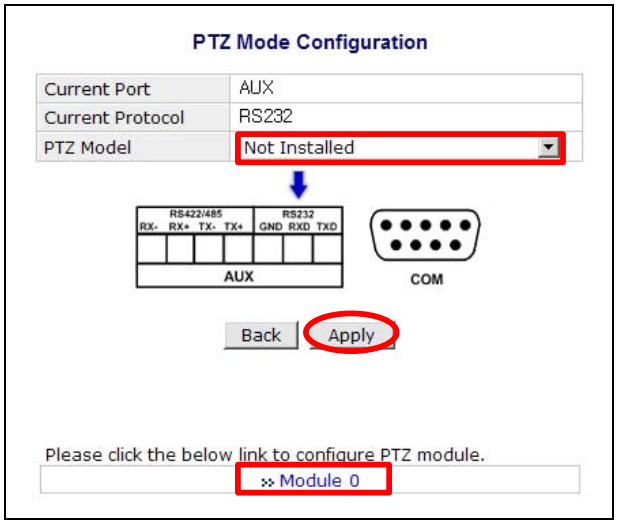
When you install a RS-485/422 interfaced PTZ model:

PTZ device has to be connected to **RS422/485** in AUX port.

When you install a RS-232 interfaced PTZ model:

PTZ device has to be connected to **RS232** in AUX port.

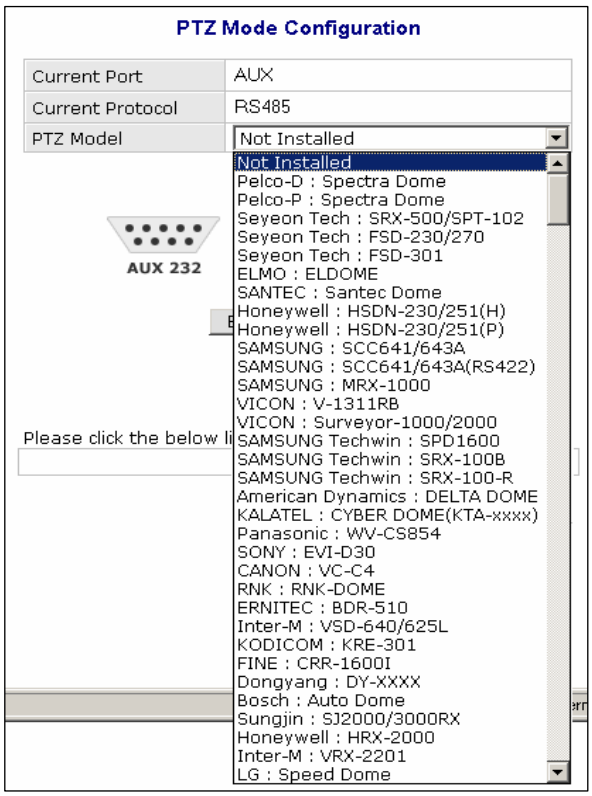
After making connection to AUX port, please select PTZ camera or Receiver model in the PTZ list. And click “Apply” button to save new settings.

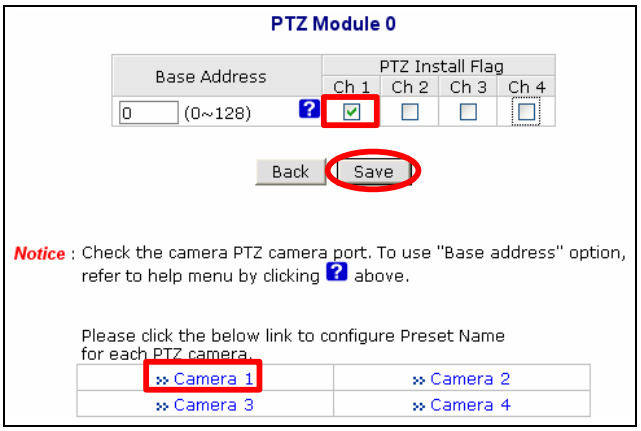


3. After selecting the model name, click “Module 0”. And then, please check channel number which PTZ camera is connected to.

** Before you purchase a Receiver or PTZ camera, please contact your local supplier or Seyeon Tech Co., Ltd. to check if the PTZ device is supported by FlexWATCH Server or not.*

** You can see current supported PTZ protocol by looking at the PTZ model list. (Currently 34 PTZ camera models are supported and more PTZ devices would be added later.)*





4. Base Address + CH # should be equal to PTZ camera address.

   Example) Base Address: 0

   FW3450 ch1 ~ ch4: value of 1~4.

   PTZ camera address connected to CH1: 1

   PTZ camera address connected to CH2: 2

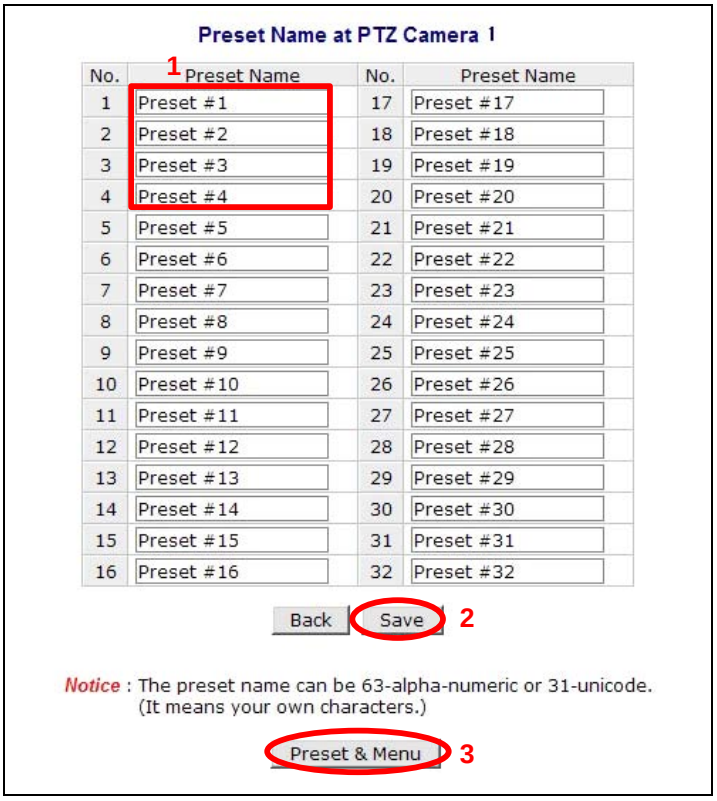
   PTZ camera address connected to CH3: 3

   PTZ camera address connected to CH4: 4

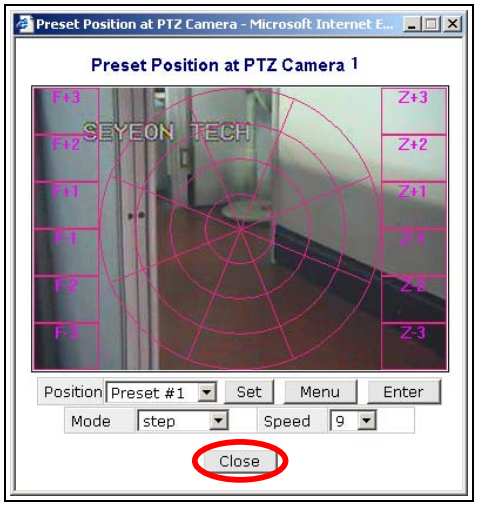
5. After checking channel numbers, please click Save button to save new setting values. The above figure is when only CH1 has a PTZ device connected.)

6. If PTZ camera or Receiver has preset function. You can configure preset positions by clicking

Camera number.


Preset Name at PTZ Camera 1
1
No.
Preset Name
No.
Preset Name
1 Preset #1 17 Preset #17
2 Preset #2 18 Preset #18
3 Preset #3 19 Preset #19
4 Preset #4 20 Preset #20
5 Preset #5 21 Preset #21
6 Preset #6 22 Preset #22
7 Preset #7 23 Preset #23
8 Preset #8 24 Preset #24
9 Preset #9 25 Preset #25
10 Preset #10 26 Preset #26
11 Preset #11 27 Preset #27
12 Preset #12 28 Preset #28
13 Preset #13 29 Preset #29
14 Preset #14 30 Preset #30
15 Preset #15 31 Preset #31
16 Preset #16 32 Preset #32
Back
Save
2
Notice : The preset name can be 63-alpha-numeric or 31-unicode.
(It means your own characters.)
Preset & Menu
3

7. Maximum 32 preset positions can be configured and you can change their names.
8. After changing preset names for each preset position, please click “Save” button.
9. Then, please click “Preset & Menu” to set preset position for each preset. You can see below image in a pop-up window and please set your desired position by PTZ function. Click “Set” to save new preset position.
10. After all the preset settings for each preset, Please click “Close” button to close the pop-up window.



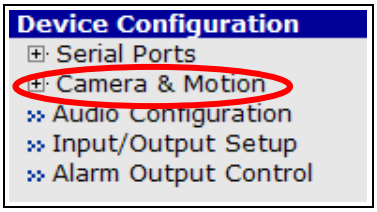
4.2. Camera & Motion [FW-3450 & FW-5450 Only]

This is to configure camera related settings such as camera value string and video quality setting. You can configure different setting values for each channel.

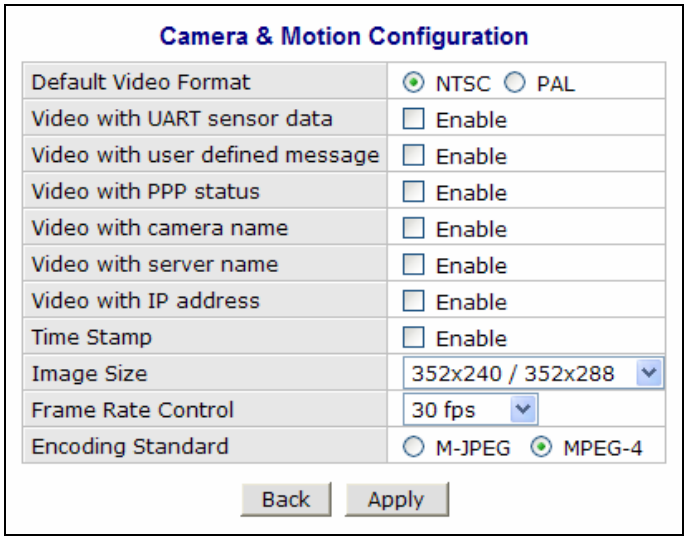
✓ Channel: Camera connected to FlexWATCH® Server.

4.2.1. Camera & Motion Configuration

1. Click “Camera & Motion” in Device Configuration group.



2. You can set various settings such as video data types and information attached to the image.



- Default Video Format: You can select NTSC or PAL for your camera attached to FlexWATCH® Server.
- Video with UART sensor Data: If you check Enable, UART sensor Data will be sent with its video data.
- Video with user defined message: If you check Enable, user defined message will be sent with its video data.
- Video with PPP status: If you check Enable, PPP status will be sent with its video data.
- Video with camera name: If you check Enable, camera name will be sent with its video data.
- Video with server name: If you check Enable, server name will be sent with its video data.
- Video with IP address: If you check Enable, IP address will be sent with its video data.
- Time Stamp: Time Stamp will be encoded with video data.
- Image Size: You can select Image Size which applies to all channels.

4 types of Image Sizes as below:

Video Format	Full	Large	Normal	Small
NTSC	704 * 480	704 * 240	352 * 240	176 * 112
PAL	704 * 576	704 * 288	352 * 288	176 * 144

- Frame Rate Control: You can select Frame Rate in FPS which applies to all channels. Thus, you can control server traffic by this parameter.
- Encoding Standard: You can select either M-JPEG or MPEG-4 which applies to all channels.

☞ *M-JPEG: each video frame or interlaced field of a digital video sequence is separately compressed as a JPEG image. Thus it requires more bandwidth than MPEG-4. However, the quality of a still image is better than MPEG-4.*

☞ *MPEG4: It consists of I-Frame (standard frame) and P-Frame (difference between pictures). Thus it*

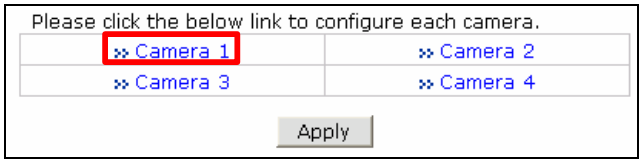
requires less bandwidth than M-JPEG. However, if it loses I-Frame or P-Frame due to unstable network, it affects the motion streaming. And also it has lower quality of a still image than M-JPEG. You can control number of P-Frames in FlexWATCH Server.

3. Click “Save” button to save new setting values.

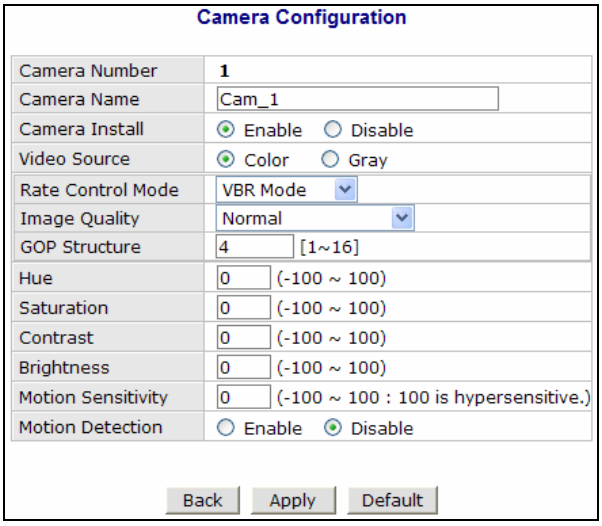
4.2.2. Camera Configuration

Through camera configuration mode, you can adjust the video quality to meet your requirement (FW-3450 & FW-5450 has 4 channels.) Each channel refers to cameras connected to FW-3450 & FW-5450.

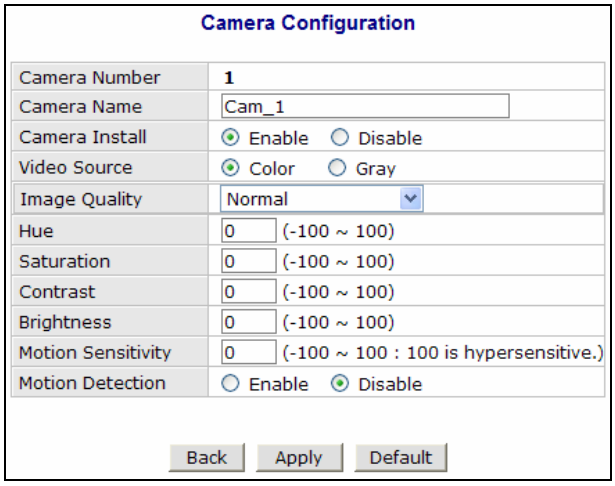
1. Please click a Camera number in Camera & Motion Configuration.



2. Configure the Camera as you wish.


Camera Configuration
Camera Number 1
Camera Name Cam_1
Camera Install Enable Disable
Video Source Color Gray
Rate Control Mode VBR Mode
Image Quality Normal
GOP Structure 4 [1~16]
Hue 0 (-100 ~ 100)
Saturation 0 (-100 ~ 100)
Contrast 0 (-100 ~ 100)
Brightness 0 (-100 ~ 100)
Motion Sensitivity 0 (-100 ~ 100 : 100 is hypersensitive.)
Motion Detection Enable Disable
Back Apply Default

In case of MPEG4


Camera Configuration
Camera Number 1
Camera Name Cam_1
Camera Install Enable Disable
Video Source Color Gray
Image Quality Normal
Hue 0 (-100 ~ 100)
Saturation 0 (-100 ~ 100)
Contrast 0 (-100 ~ 100)
Brightness 0 (-100 ~ 100)
Motion Sensitivity 0 (-100 ~ 100 : 100 is hypersensitive.)
Motion Detection Enable Disable
Back Apply Default

In case of M-JPEG

- Camera Number: Channel number, which can’t be changed. (1 ~ 4)
- Camera Name: Channel’s name with 21 Alpha-numeric letters or 10 Unicode letters.
- Camera Install: When a camera is connected to FlexWATCH server, if you select Enable you can see images from Camera, otherwise, you can’t see images from camera.
- Video Source: If you select Gray, the images from camera will be in Gray mode.
- Image Quality settings

MPEG	Rate Control Mode : VBR (Variable Bit Rate) : A Frame is made based on	Image Quality You can control 6 levels (Low Compression, Highest, High, Normal, Low, and Lowest).

	Image quality & GOP Structure. Frame sizes vary depending on bandwidth.	GOP Length between I-Frame and next I-Frame. P-frame is filled up between them.
	Rate Control Mode : CBR (Constant Bit Rate) : A frame is made based on Bit Rate Control and GOP structure but the size of frames is the same.	Bit Rate Control Total number of bits being encoded in a second. The bigger Bit Rates, the better image quality.
		GOP Length between I-Frame and next I-Frame. P-frame is filled up between them.
JPEG		Image Quality You can control 6 levels (Low Compression, Highest, High, Normal, Low, and Lowest).

✓ Image Quality : Compressed Image quality

Low Compression	Highest	High	Normal	Low	Lowest

✓ Going left means better image quality with higher network bandwidth.

✓ Going right means less network bandwidth with lower image quality.

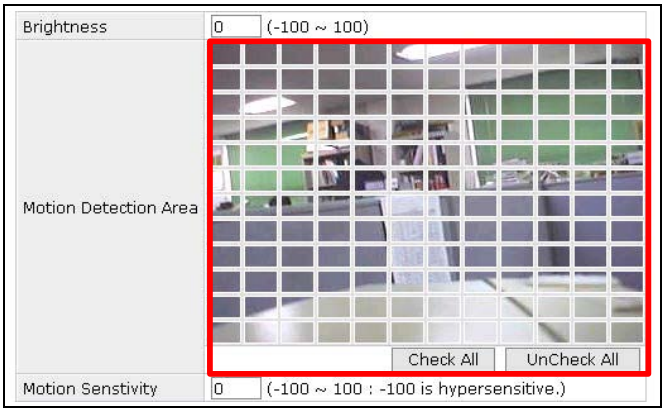
- Hue: You can control color level of Image between –100 and 100.
- Saturation: You can control saturation level between -100 and 100.
- Contrast: You can control contrast level between -100 and 100.
- Brightness: You can brightness saturation level between -100 and 100.
- Motion Sensitivity: You can control motion sensitivity under Motion Detection Area.
  –The value can be between -100 and 100. (100 is most sensitive.)
- Motion Detection: If you select Enable, you can set desired motion detected area by yourself.

3. After all settings have been done, click Apply button. If you click Default, all the values will be restored with factory default values.

4.2.3. Motion Detection Area Configuration

1. Select Enable in Motion Detection.

2. You can set motion detected area by clicking each block.

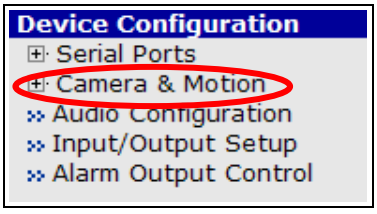


- Check All: you can set all the motion detected area at once.
- UnCheck All: Clear all the motion detected area.
- Motion Sensitivity: you can change motion Sensitivity between -100 and 100. (100 is most sensitive.)

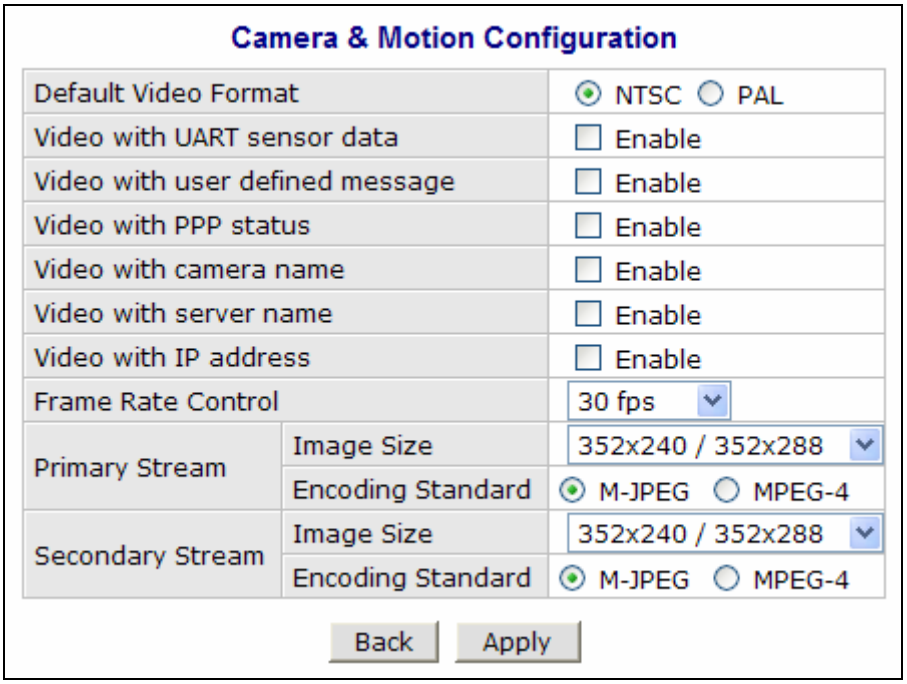
4.3. Camera & Motion [FW-1130 & FW-3150 Only]

This is to configure camera related settings such as camera value string and video quality setting. You can configure different setting values for each channel.

1. Click “Camera & Motion” in Device Configuration group.



2. You can set various settings such as video data types and information attached to the image.



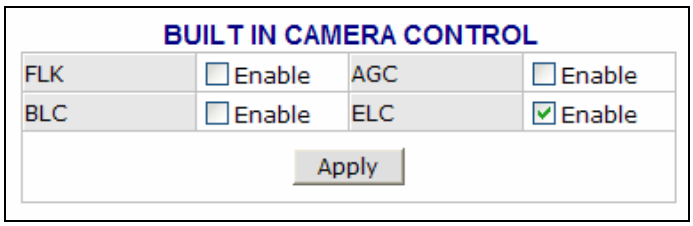
- Default Video Format: You can select NTSC or PAL for your camera attached to FlexWATCH® Server.
- Video with UART sensor data: If you check Enable, UART sensor Data will be sent with its video data.
- Video with user defined message: If you check Enable, user defined message will be sent with its video data. .
- Video with PPP status: If you check Enable, PPP status will be sent in video data header.
- Video with camera name: If you check Enable, camera name will be sent with its video data.
- Video with server name: If you check Enable, server name will be sent with its video data.
- Video with IP address: If you check Enable, IP address will be sent in its video data header.
- Frame Rate Control: You can select Frame Rate in FPS which applies to all channels. Thus, you can control server traffic by this parameter. It applies to both Primary Stream and Secondary Stream.
- Image Size: You can select Image Size for each Stream.
  - ✓ 4 types of Image Sizes as below :

	Full	Large	Normal	Small
NTSC	704 * 480	704 * 240	352 * 240	176 * 112
PAL	704 * 576	704 * 288	352 * 288	176 * 144

- Encoding Format: You can select either M-JPEG or MPEG-4 for Primary Stream and Secondary Stream.

The Image Size of Primary Stream equals to the Maximum Image Size of Secondary Stream. Because video source of Secondary Stream is from Primary Stream.

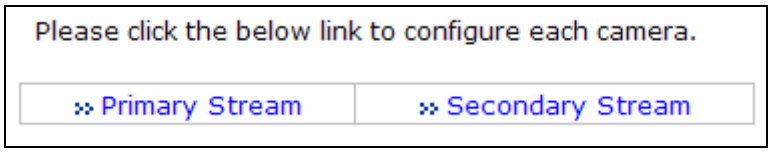
✓ You can configure CCD functions for FW-1130 as below.

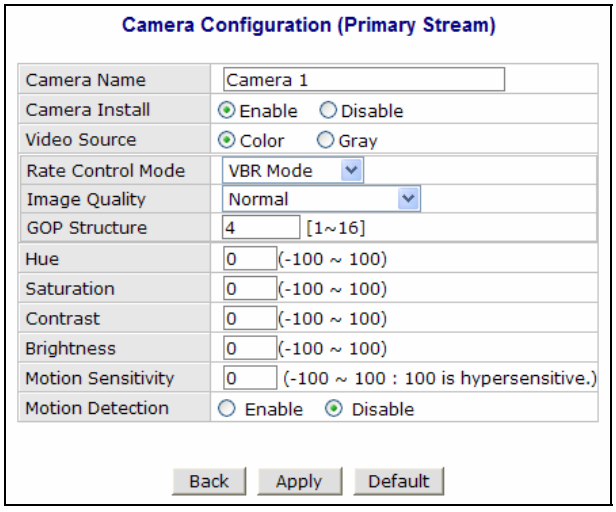


- FLK (Flickerless): To protect video flickering caused by AC frequency.
- AGC (Automatic Gain Control): To control CCD sensitivity by Gain control.
- BLC(Back Light Compensation): To control the image quality under Back Light
- ELC (Electronic Light Control): To control brightness by automatic shutter speed.

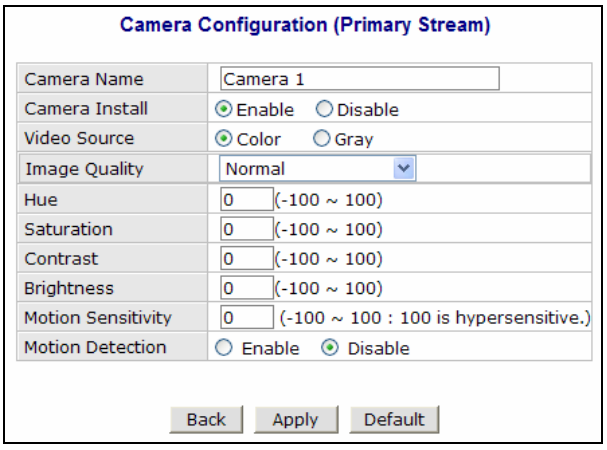
Configuration of Secondary Stream is limited because video source of Secondary Stream is from Primary Stream. Configuration for Camera Install, Video Source to Gray, Hue, Saturation, Contrast, Brightness, and Motion Detection is dependent on Primary Stream's settings.

3. To configure Primary Stream, please click Primary Stream.





In case of MPEG4



In case of M-JPEG

- Camera Name: Channel's name with 21 Alpha-numeric letters or 10 Unicode letters.

- Camera Install: When a camera is connected to FlexWATCH server, if you select Enable you can see images from Camera, otherwise, you can't see images from camera.
- Video Source: If you select Gray, the images from camera will be in Gray mode.
- Image Quality settings

MPEG	Rate Control Mode : VBR (Variable Bit Rate) : A Frame is made based on Image quality & GOP Structure. Frame sizes vary depending on bandwidth.	Image Quality You can control 6 levels (Low Compression, Highest, High, Normal, Low, and Lowest).
		GOP Length between I-Frame and next I-Frame. P-frames are filled up between them.
	Rate Control Mode : CBR (Constant Bit Rate) : A frame is made based on Bit Rate Control and GOP structure but the size of frames is the same.	Bit Rate Control Total number of bits being encoded in a second. The bigger Bit Rates, the better image quality.
		GOP Length between I-Frame and next I-Frame. P-frames are filled up between them.
JPEG		Image Quality You can control 6 levels (Low Compression, Highest, High, Normal, Low, and Lowest).

- Image Quality: Compressed Image quality.

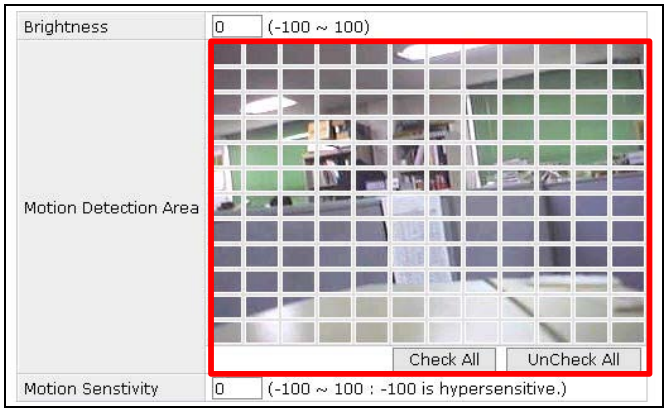
Low Compression	Highest	High	Normal	Low	Lowest

✓ Going left means better image quality with higher network bandwidth. .
✓ Going right means less network bandwidth with lower image quality.

- Hue: You can control color level of Image between –100 and 100.
- Saturation: You can control saturation level between -100 and 100.
- Contrast: You can control contrast level between -100 and 100.
- Brightness: You can brightness saturation level between -100 and 100
- Motion Sensitivity: You can control motion sensitivity under Motion Detection Area.
  –The value can be between -100 and 100. (100 is most sensitive.)
- Motion Detection: If you select Enable, you can set desired motion detected area by yourself.
- After all settings have been done, click Apply button. If you click Default, all the values will be restored with factory default values.

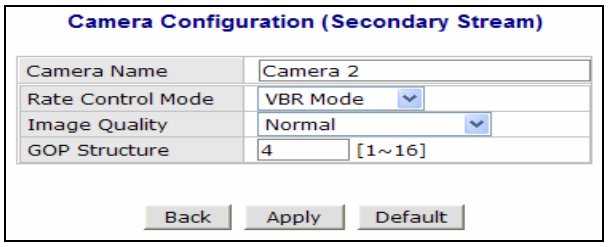
4. Select Enable in Motion Detection.

5. You can set motion detected area by clicking each block.

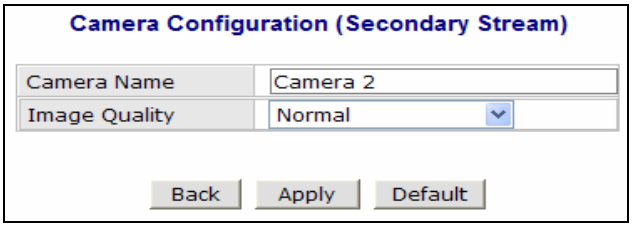


- Check All: can set all the motion detected area at once.
- UnCheck All: Clear all the motion detected area.
- Motion Sensitivity: you can change motion Sensitivity between -100 and 100. (100 is most sensitive.)

6. You can configure Secondary Stream.



In case of MPEG-4



In case of M-JPEG

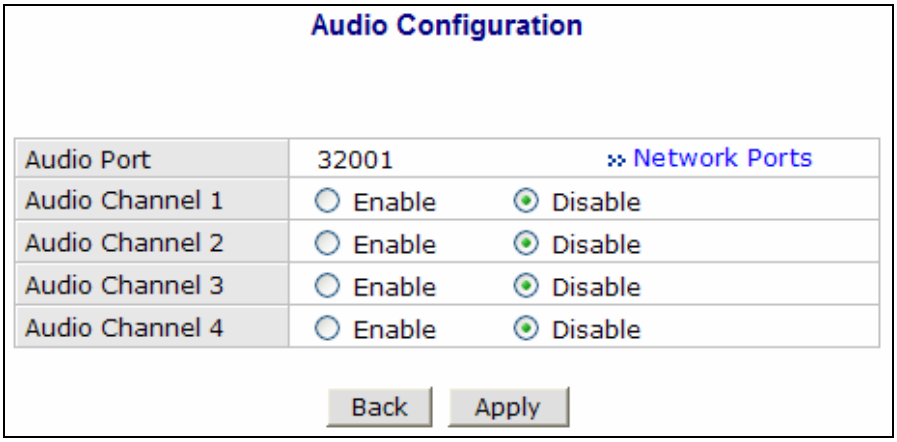
Almost all parameters are dependent on Primary Stream.

4.4. Audio Configuration [FW-3450 & FW-5450 Only]

FW-3450 & FW-5450 support 2-way audio streaming function. Firstly, they get the audio inputs from 4 channels and transmit the audio data with video. And FlexWATCH server also receives the audio data from user's PC and sends out through the Audio output of FlexWATCH server.

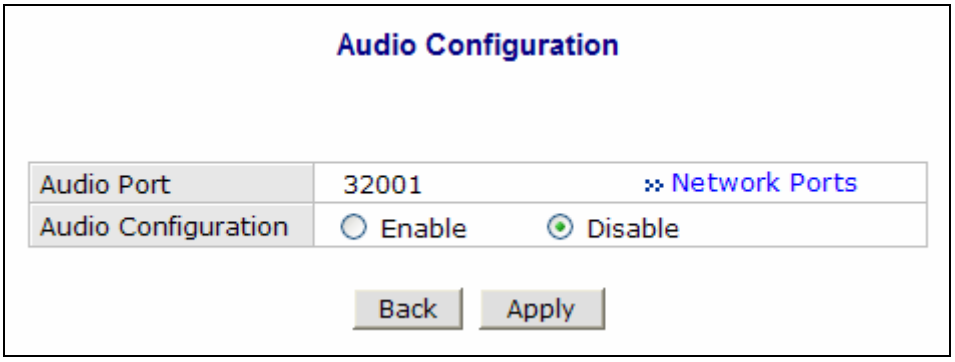
Without any external audio devices, you can not only use synchronized audio and video from each channel but also send user's voice or any other sounds to FW-3450 & FW-5450 by PC's microphone and you can hear this audio from FW-3450 & FW-5450 with a speaker.

You can configure the audio functions as below.



1. Audio Port is a network port that receives audio input from PC. Default value is 32001 and you can change the port number in Network Ports menu.
2. You can select Enable or Disable for each audio channel. If it is enabled, audio input will be transmitted with video data. Otherwise, no audio data will be streamed with video. The default is in Disable.

4.5. Audio Configuration [FW-1130 & FW-3150 Only]

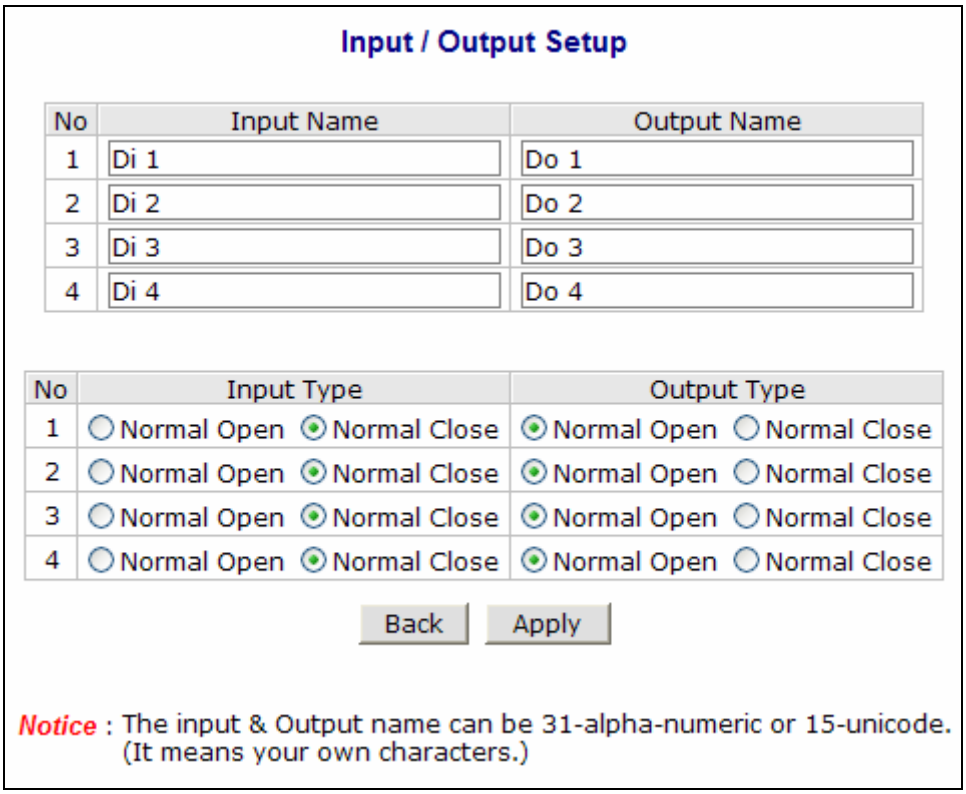


1. Audio Port is a network port that receives audio input from PC. Default value is 32001 and you can change the port number in Network Ports menu. .
2. You can enable or disable the audio function.

☞ *FW-1130 / FW-3150 have one video input and audio input. Thus, the audio transmission of Primary Stream and Secondary Stream is identical and Enable/Disable will apply to both streams*

4.6. Input/Output Setup [FW-3450 & FW-5450 Only]

FW-3450 & FW-5450 provide you with 4 serial input and output ports. For example, you can connect a sensor to serial input and a flashing light to serial output. In this case, you first install the physical devices and assign names to serial devices so that you can distinguish them later when you have many FlexWATCH servers.



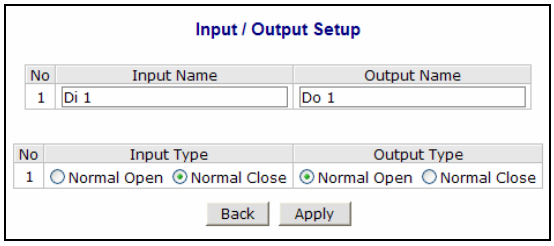
You can enter Input Name and Output Name with up to 31 alpha-numeric letters or up to 15 Unicode letters. After entering names, please click “Apply” button.

4.6.1. Input / Output Type Configuration

- Please select Normal Open Type for normal open type sensor connected to DI. Normal Open means that a switch normally is off and when an event is occurred the switch turns on.
- Please select Normal Close Type for normal close type sensor connected to DI. Normal Close means that a switch normally is on and when an event is occurred the switch turns off.

☞ *Please select Input Type in accordance with Sensor Type and select Output Type in accordance with Alarm’s working type. Specially, if you physically don’t use DI, please select Normal Open for Input Type.*

4.7. Input/Output Setup [FW-1130 & FW-3150 Only]



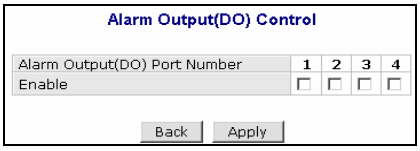
4.7.1. Input / Output Type Configuration

- Please select Normal Open Type for normal open type sensor connected to DI. Normal Open means that a switch normally is off and when an event is occurred the switch turns on.
- Please select Normal Close Type for normal close type sensor connected to DI. Normal Close means that a switch normally is on and when an event is occurred the switch turns off.

- *Please select Input Type in accordance with Sensor Type and select Output Type in accordance with Alarm's working type. Specially, if you physically don't use DI, please select Normal Open for Input Type.*

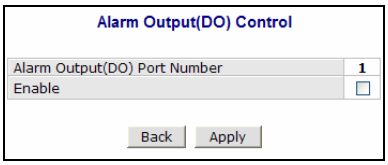
4.8. Alarm Output Control [FW-3450 & FW-5450 Only]

FW-3450 & FW-5450 have 4 Alarm Outputs. If you select Enable for DO, it is arbeit contact; otherwise, it is break contact.



4.9. Alarm Output Control [FW-1130 & FW-3150 Only]

FW-3150 has 1 alarm Output. If you select Enable for DO, it is arbeit contact; otherwise, it is break contact.

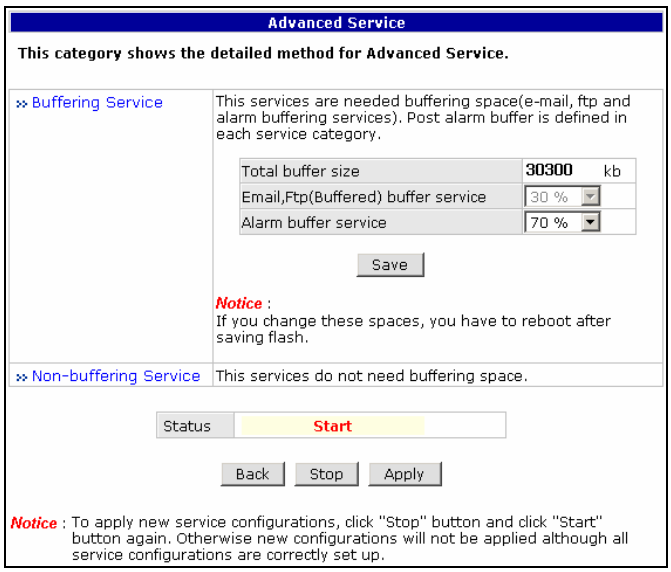


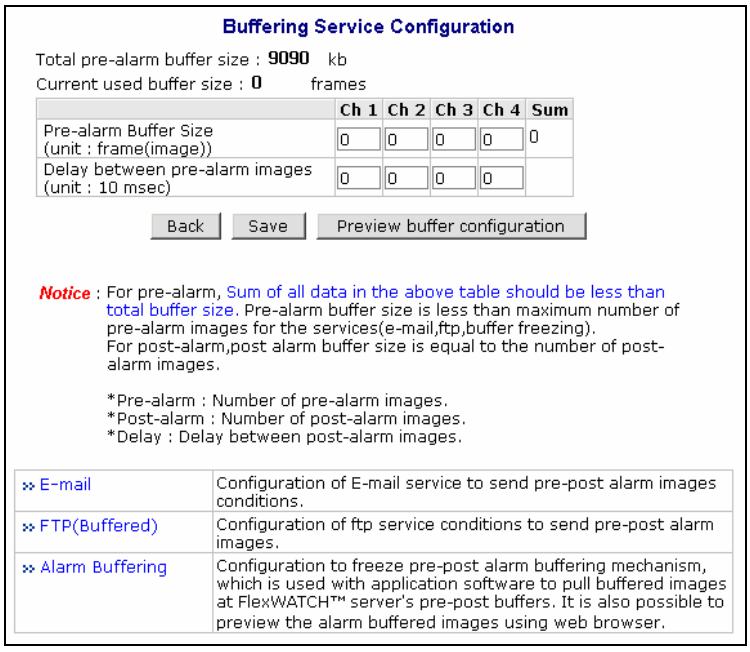
5. Advanced Configuration

You can use various advanced functions such as E-mail notification with pre & post alarm images, FTP notification with pre & post alarm images, Sensor notification and Alarm Output, etc.

5.1. Advanced Services

Advanced service configuration is intended to provide more sophisticated functions which are required by sophisticated users. Thus, if you are not familiar with or not good at advanced features, we recommend you to refer to separate Advanced Services Manual.


Advanced Service
This category shows the detailed method for Advanced Service.
» Buffering Service
This services are needed buffering space(e-mail, ftp and alarm buffering services). Post alarm buffer is defined in each service category.
Total buffer size
30300
kb
Email,Ftp(Buffered) buffer service
30 %
Alarm buffer service
70 %
Save
Notice :
If you change these spaces, you have to reboot after saving flash.
» Non-buffering Service
This services do not need buffering space.
Status
Start
Back
Stop
Apply
Notice : To apply new service configurations, click "Stop" button and click "Start" button again. Otherwise new configurations will not be applied although all service configurations are correctly set up.


Buffering Service Configuration
Total pre-alarm buffer size : 9090 kb
Current used buffer size : 0 frames
Ch 1
Ch 2
Ch 3
Ch 4
Sum
Pre-alarm Buffer Size (unit : frame(image))
Delay between pre-alarm images (unit : 10 msec)
Back
Save
Preview buffer configuration
Notice : For pre-alarm, Sum of all data in the above table should be less than total buffer size. Pre-alarm buffer size is less than maximum number of pre-alarm images for the services(e-mail,ftp,buffer freezing).
For post-alarm,post alarm buffer size is equal to the number of post-alarm images.
*Pre-alarm : Number of pre-alarm images.
*Post-alarm : Number of post-alarm images.
*Delay : Delay between post-alarm images.
» E-mail
Configuration of E-mail service to send pre-post alarm images conditions.
» FTP(Buffered)
Configuration of ftp service conditions to send pre-post alarm images.
» Alarm Buffering
Configuration to freeze pre-post alarm buffering mechanism, which is used with application software to pull buffered images at FlexWATCH™ server's pre-post buffers. It is also possible to preview the alarm buffered images using web browser.

6. Recording Configuration [FW-5450 Only]

Only when you install a HDD into FlexWATCH® 5450, you can record & search images. Recording configuration menu won't be available if FW5450 is without a HDD. You can do HDD format, HDD information check, motion & event condition setup for recording, etc.

6.1. HDD Configuration

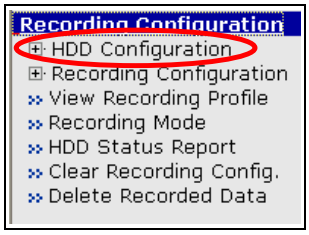
You can do HDD format and HDD information check in this menu.

6.1.1. HDD Format

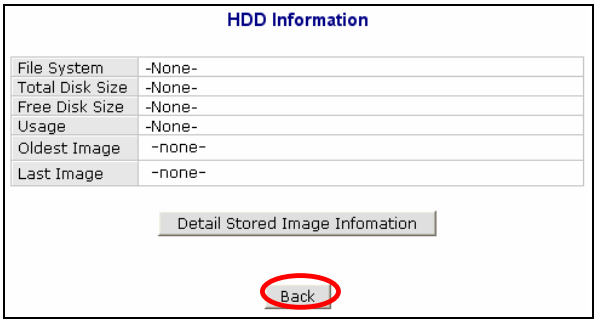
1. Please turn off FW-5450.

> *When you install a HDD (Hard Disk Drive), please turn off the FW5450. Otherwise, the HDD might have a problem.*

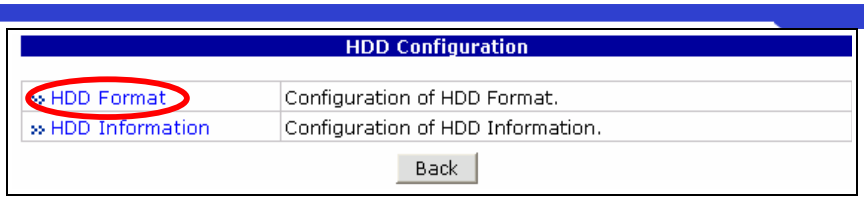
2. Install a HDD and turn on the FW-5450.
3. Please access to the web page of FW-5450 and go to "Admin" menu. Click "Recording Configuration".



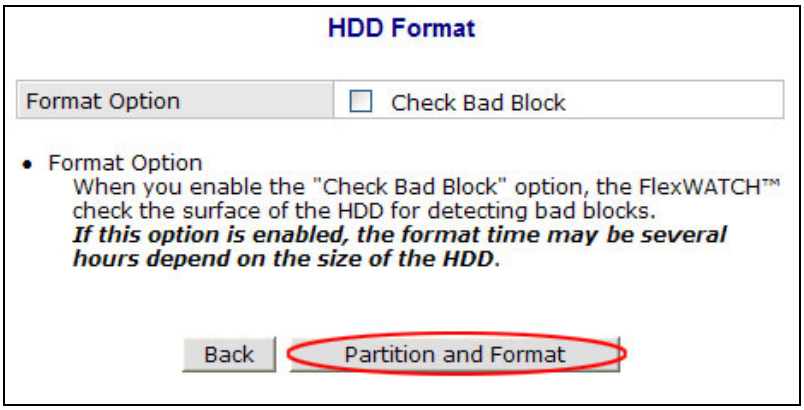
4. Please check current format status of the HDD by Clicking "HDD Information".



5. If HDD Information has "-None-", it hasn't been formatted yet. Thus, please click "Back" and click "HDD Format".



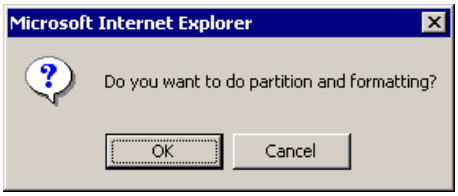
6. When you enable the “check Bad Block” option, the FlexWATCH will check the surface of the HDD for detecting bad blocks. This format takes longer format time and may be several hours depending on the size of HDD.


HDD Format
Format Option
Check Bad Block
Format Option
When you enable the "Check Bad Block" option, the FlexWATCH™ check the surface of the HDD for detecting bad blocks.
If this option is enabled, the format time may be several hours depend on the size of the HDD.
Back
Partition and Format

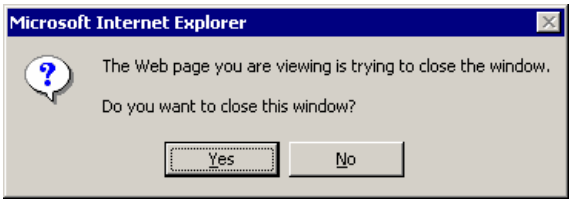
Format times are as follows:

- 80G HDD : about 3 minutes
- 120G HDD: about 5 minutes
- 160G HDD: about 7 minutes
- 250G HDD: about 10 minutes

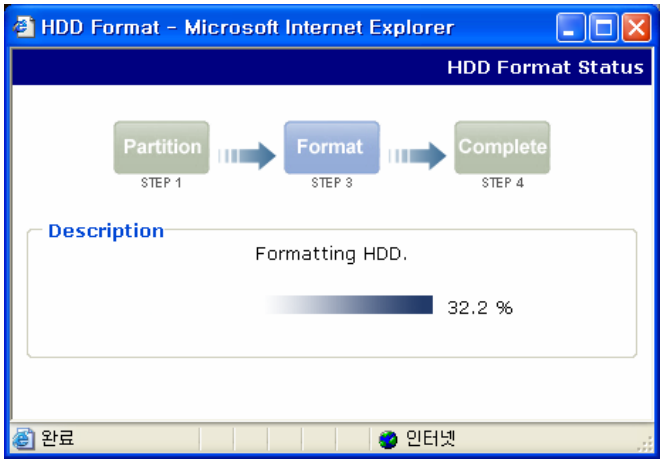
7. When you click “Partition and Format” button, you will see a pop-up window as below. If you want to format the HDD, please click OK. Otherwise, click Cancel.



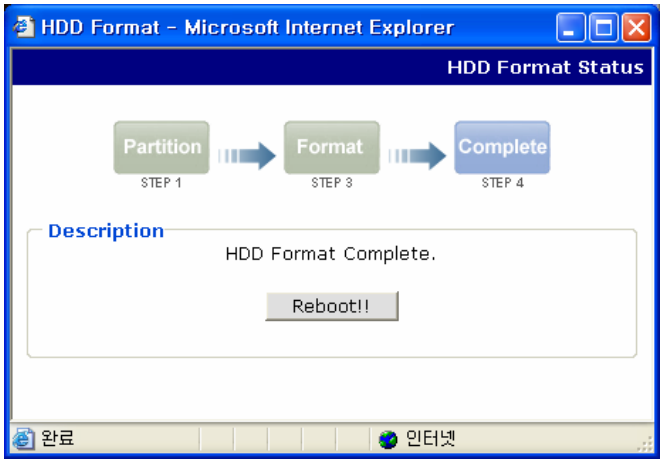
8. If you click OK, you will see the below pop-up window. Please click “Yes” to close the webpage.


Microsoft Internet Explorer
The Web page you are viewing is trying to close the window.
Do you want to close this window?
Yes
No

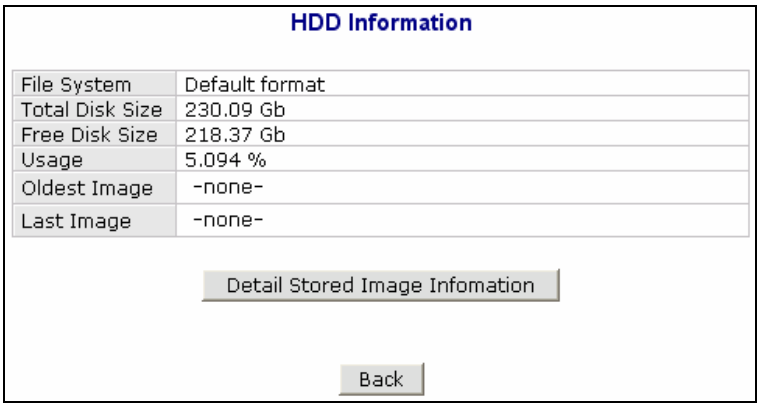
9. After closing webpage, you can check the status of HDD format as below image.



> *During HDD format, if FW-5450 is shut down abnormally. HDD would be damaged. After completion of HDD format, please click "Reboot" button.*



10. After rebooting, please check the current HDD status in HDD information menu as below.



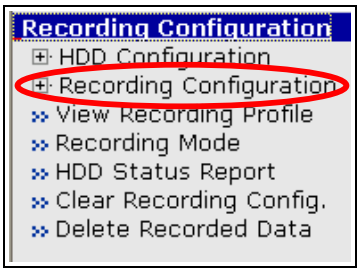
6.2. Recording Configuration

You can configure recording conditions for each camera such as motion detection recording, 24 hours recording, schedule recording, event recording, etc. If you have cameras registered by “RX Module Registration”, you can also record images from those cameras.

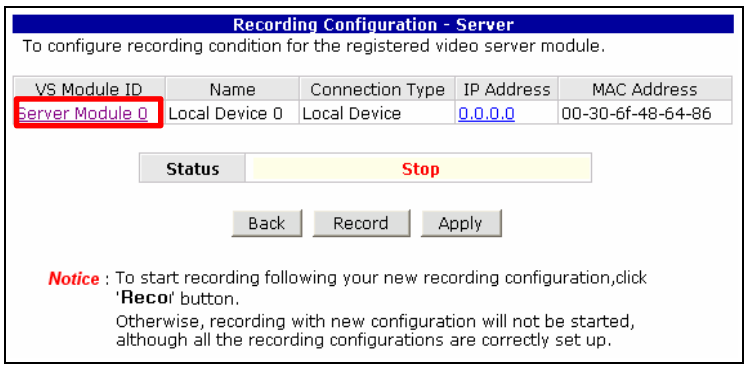
6.2.1. Recording Configuration

When you click “Recording Configuration”, you can see available server list for recording. For example, if FW5450 has 2 FW3450s registered to “RX Module Registration”, VS Module ID shows you 3 servers in the list. Therefore, FW-5450 can record not only its 4 cameras but also other remote cameras attached the other FlexWATCH Server registered to FW-5450. Below is the example of motion detection recording setting.

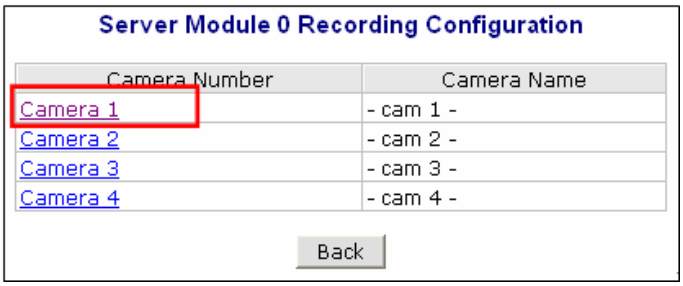
1. Click “Recording Configuration” in Recording Configuration menu.



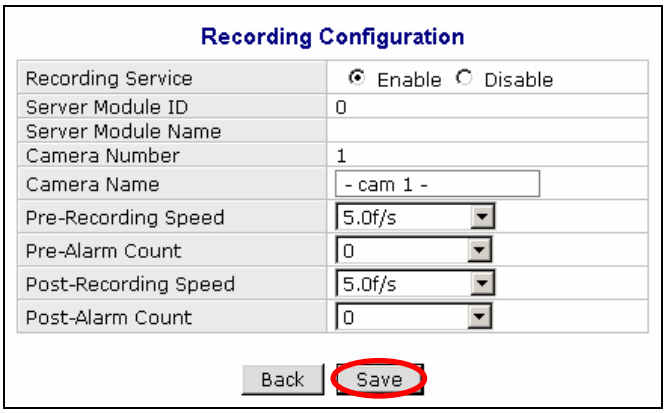
2. This menu shows you the list of VS Module ID, Server name, Connection Type, server IP address, and MAC address. You can configure each camera of VS modules. Below is the case that you select “Server Module 0” and select cameras connected to FW-5450 for recording configuration.



3. “Server Module 0” refers to FW-5450 itself. Thus it shows you 4 cameras which can be configured. You can configure each camera by selecting it. If you want to configure the Camera 1, then Click “Camera 1”.

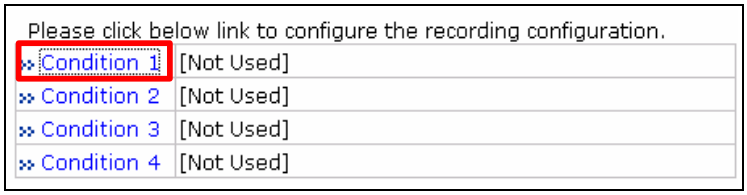


4. After Selecting “Camera 1”, you will see below configuration screen and you can set recording speed, camera name, etc. After changing the setting values, please click “Save” button.



Name	Description
Recording Service	If you want to record, please click “Enable”. Otherwise, click “Disable”.
Server Module ID	RX Module ID
Camera Number	Camera number
Camera Name	You can enter camera name with up to 31 alpha-numeric letter or 15 Unicode letters.
Pre-Recording Speed	Recording speed before the event occurs
Pre-Alarm Count	When Event Recording, up to 5 frames right before the event can be recorded.
Post-Recording Speed	Recording speed after the event occurs
Post-Alarm Count	When Event Recording, up to 5 frames right after the event can be recorded.

5. Below menu is for other recording conditions. Up to 4 conditions can be applied to each camera. For example, if you set Condition 1 & 2, FW-5450 will record when Condition 1 or Condition 2 is satisfied.



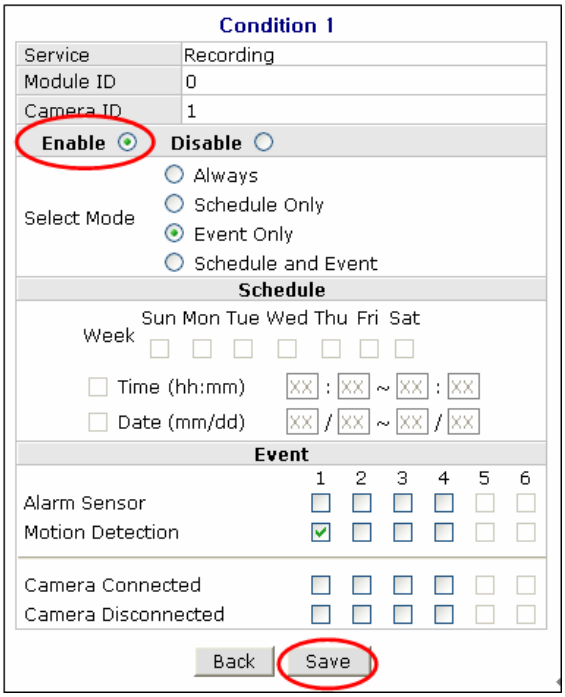
6. You can configure the recording conditions for each camera.

EX) Select Mode: Schedule and Event

Schedule: Tue.

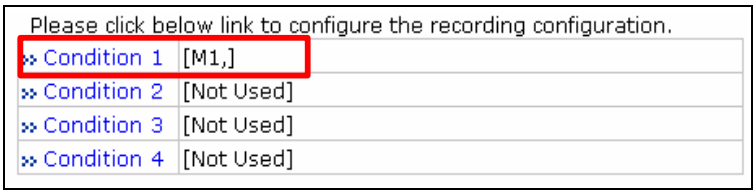
Event: Motion Detection on CH 1

Condition 1: When motion is detected in CH1 on every Tuesday, FW-5450 will do recording.

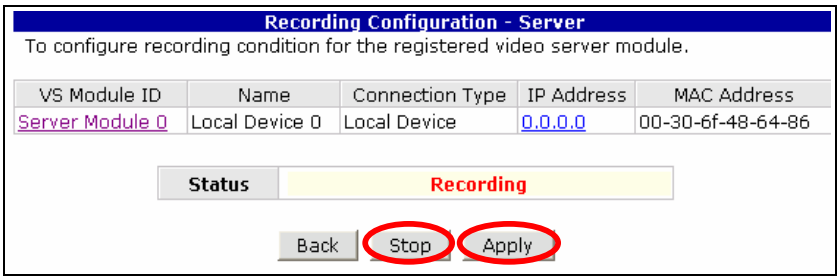


Menu	Options	Description
Select Mode	Always	24hours 365days recording
	Schedule Only	Recording by Date, Time or Day
	Event Only	Recording by Events such as Alarm, Motion, and Camera Disconnection.
	Schedule and Event	Recording by Schedule and Events
Schedule	Week	You can set from Sunday to Saturday
	Time	You can set Time
	Date	You can set Date
Event	Alarm Sensor	Recording by Alarm sensor from DI
	Motion Detection	1,2,3,4 refer to Camera number. If 1 is checked, when motion is detected in CH1, FW-5450 will record images. For example, if all 1,2,3,4 are checked, then when all of Ch1, Ch2, Ch3, and Ch4 have detected motions, FW-5450 will record images from Camera 1 in the above case.
	Camera Connected	When Camera is physically connected to FW-5450, it will record.
	Camera Disconnected	When Camera is physically disconnected to FW-5450, or power of Camera is off, it will record.

7. After recording condition settings, please click “Save” and click “Back” to go back to the previous page to check the status of Condition 1 as following image.


Please click below link to configure the recording configuration.
Condition 1 [M1,]
Condition 2 [Not Used]
Condition 3 [Not Used]
Condition 4 [Not Used]

8. After completion of all of recording configuration, Please click “Record” button to start recording. Click “Apply” button to put new setting values into Flash memory.

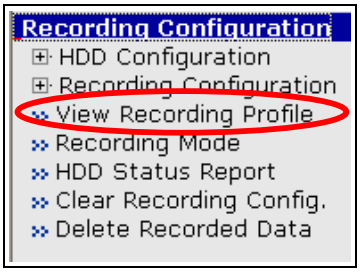


When you click Record button, the record button becomes Stop button. If you want to stop Recording, you can click Stop button.

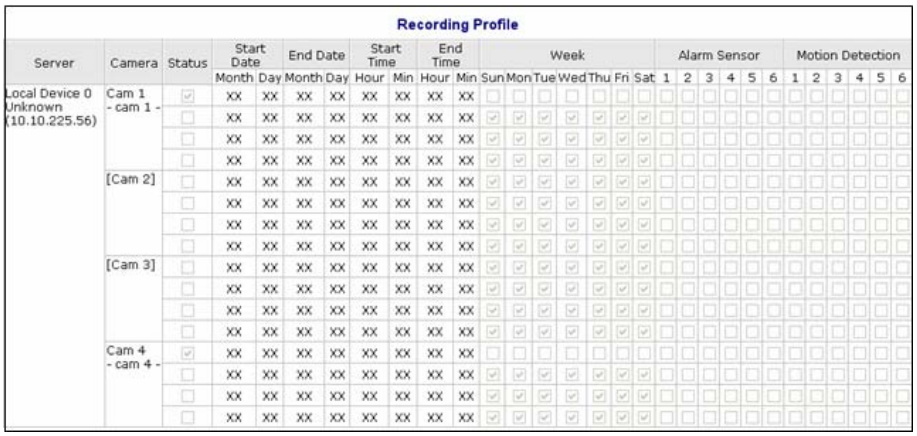
6.3. View Recording Profile

You can see all the setting values that you have set for all the cameras in a pop-up window.

1. Click View Recording Profile.



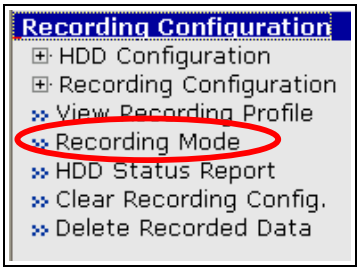
2. Then you will see a pop-up window.



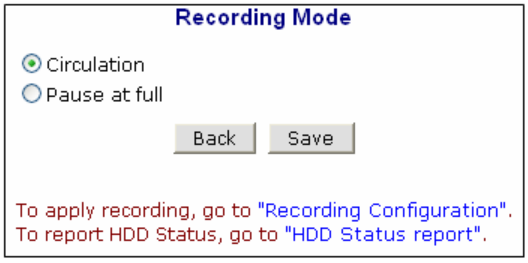
6.4. Recording Mode

You can select either Circulation mode or Pause at full mode.

1. Click Recording Mode in Recording Configuration menu.



2. You will see below menu. If you want to keep recording when HDD is full, you can select Circulation mode. FW-5450 will continuously be recording from the beginning of the HDD. If you select “Pause at full” mode, when HDD is full, FW-5450 will stop recording. After recording mode selection, please click “Save”. To apply recording, go to “Recording Configuration” menu.

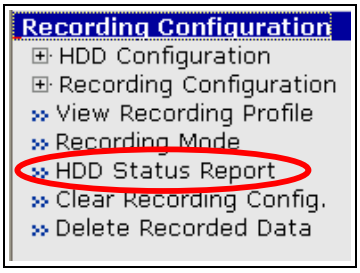


Circulation	Each recorded file is 630Mbytes. When HDD is full, the oldest file of 630Mbytes will be deleted.
Pause at full	When HDD is full, Recording status will become STOP. You can receive email notification by HDD Status Report function.

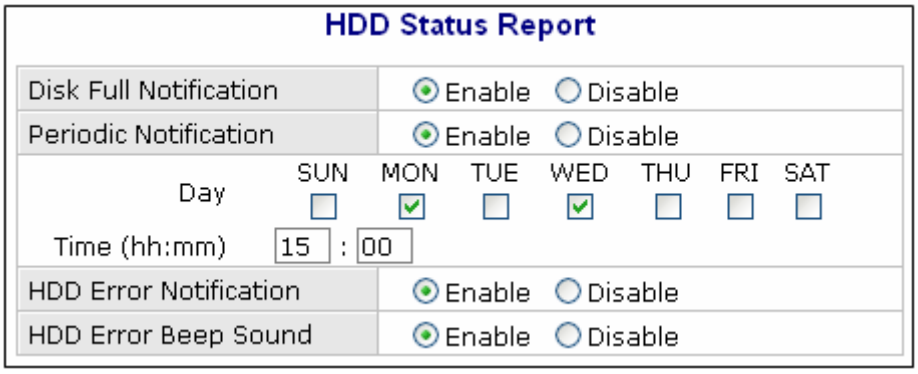
6.5. HDD Status report

HDD status can be sent to user defined e-mail accounts so that user can get HDD status from the server. Disk full and Periodic status information can be sent to user's e-mail account.

1. Click "HDD Status Report" in Recording Configuration menu.

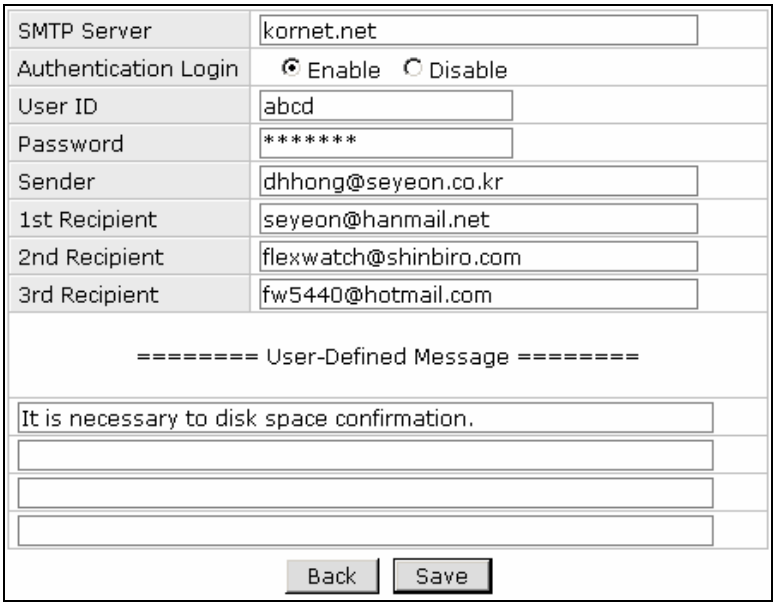


2. Please enable the services you want. You can choose Day & Time for Periodic Notification.



Disk Full Notification	When HDD is full, you will get an email notification.
Periodic Notification	You will get a periodic report of HDD status based on schedule.
Day & Time	You can choose Day & Time for periodic Notification. In the above setting, you will get a report on every Monday & Wednesday 3 P.M.
HDD Error Notification	When HDD error occurs, you will get an email notification.
HDD Error Beep Sound	When HDD error occurs, you will hear Beep sound by enabling.

3. Please write all the necessary information of your email services such as SMTP server, ID&PW, etc.

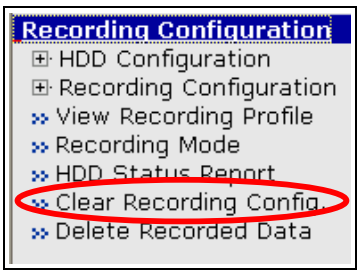


SMTP Server	SMTP Server address
Authentication Login	Select whether you use Authentication login or not
User ID	User ID for Authentication Login
Password	User Password for Authentication Login
Sender	Sender's E-mail address
1st Recipient	Recipients' E-mail addresses (Max. 3 Recipients)
2nd Recipient	
3rd Recipient	
User Defined Message	User defined message attached to E-mail

6.6. Clear Recording Config

This function will initialize the Recording setting values in Recording configuration menu for FW-5450.

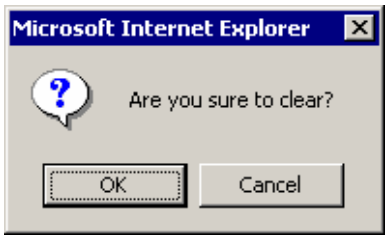
1. Click "Clear Recording Config" in Recording Configuration menu.



2. If you click Clear button, you will be asked once again to make sure.

Clear Recording Configuration
Click 'Clear' to completely delete all the recording configuration you have made in the system and start new configuration.
Please be more careful not to loose your current recording configuration.
Back
Clear

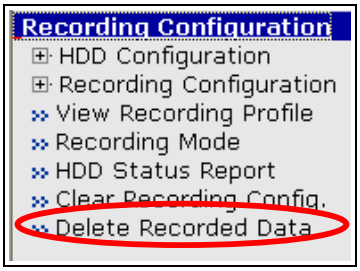
3. If you click OK, the Recording setting values will be cleared.



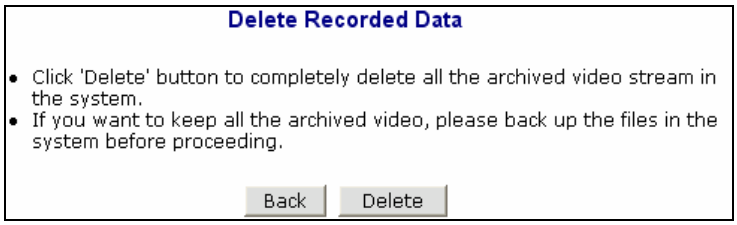
6.7. Delete Recorded Data

This function is to totally delete all the recorded data in HDD.

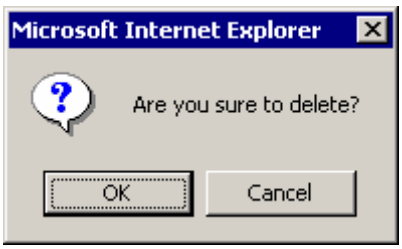
1. Click “Delete Recorded Data” in Recording Configuration menu.



2. Click “Delete” button to delete all the data in HDD.


Delete Recorded Data
Click 'Delete' button to completely delete all the archived video stream in the system.
If you want to keep all the archived video, please back up the files in the system before proceeding.
Back
Delete

3. You will be asked once again to make sure that you really want to delete all data. If you click “OK”, FW-5450 will delete all data in HDD.



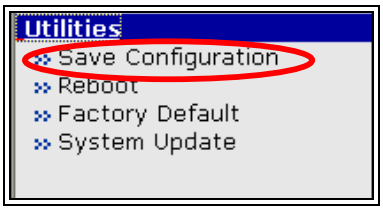
7. Utilities

Flash memory update, rebooting, factory default, system upgrade, etc.

7.1. Save Configuration

This function saves current all settings into Flash Memory. It is highly recommended that you do Save Configuration if you configure something in FlexWATCH® Server.

1. Click “Save Configuration” in Utilities group.



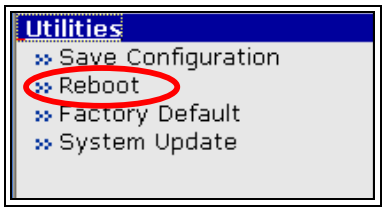
2. Click “Save Configuration” button to save current setting values. Otherwise, click Back button.

Save Configuration
Save Configuration is required to save all of new configuration in the system. Otherwise, no new configuration will be saved and effective.
If you do not want to save your new configuration, do not click 'Save Configuration' button.
Back
Save Configuration

7.2. Reboot

It reboots the FlexWATCH server. It is recommended that you reboot the system, if you configure something and do Save Configuration.

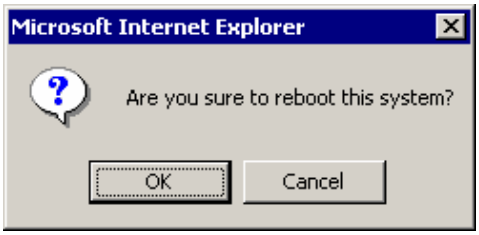
1. Click Reboot in Utilities group.



2. Click Reboot button.

Reboot
System reboot is highly and strongly recommended to applied all new configurations properly to the FlexWATCH™ system.
Back
Reboot!!

3. You will be asked once again to make sure that you really want to reboot the system. If you click “OK”, FlexWATCH server will be rebooted.

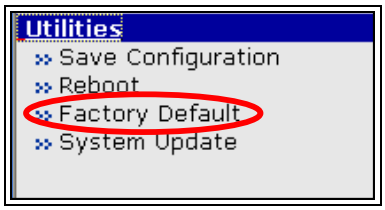


4. After confirmation, It will ask you whether you want to close the web browser or not. You won’t be able to access to webpage of FlexWATCH server Until rebooting is completed,

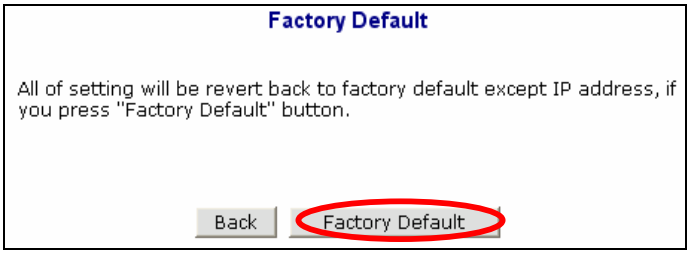
7.3. Factory Default

This function will revert to factory default for FlexWATCH® server except for network related values.

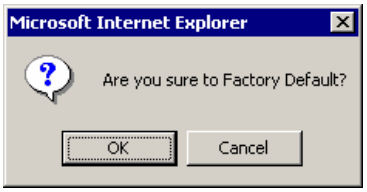
1. Click “Factory Default” in Utilities group.



2. Click Factory Default button.


Factory Default
All of setting will be revert back to factory default except IP address, if you press "Factory Default" button.
Back
Factory Default

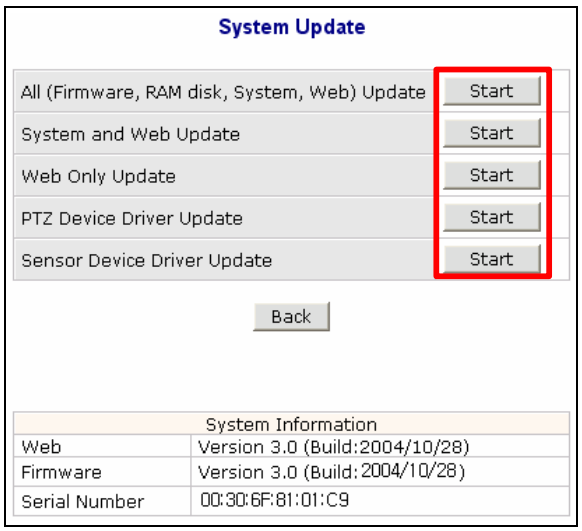
3. You will be asked once again to make sure. If you click “OK” the factory default values will be restored.



7.4. System Update

Here you can update internal program and data for FlexWATCH® Server. Internal program and data of FlexWATCH® Server is saved in Flash Memory. It consists of 4 files including Kernel Image, Ram disk Image, System Image, and Web Image.

You should have 4 separate firmware files in your PC so that you can update your FlexWATCH server with them.



1. All (Firmware, RAM disk, System, Web) Update: You can update all 4 firmware files (Firmware, RAM Disk, System, and Web).
2. System and Web Update: You can update System and Web.
3. Web Only Update: when you want to update Web only.
4. File name reference for FlexWATCH server.

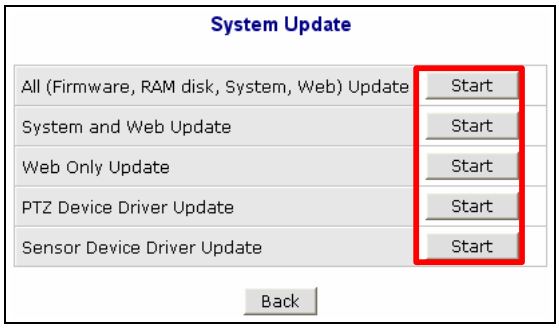
Kernel Image	a_ker_mx [FW-3450 & FW-1130 & FW-3150] a_ker_ms [FW-5450]
RAM Disk Image	a_rfs_x4.gz [FW-3450 & FW-5450] a_rfs_x1.gz [FW-1130 & FW-3150]
System Image	a_sys_m4.tar.gz {FW-3450 & FW-5450} a_sys_m1.tar.gz [FW-1130 & FW-3150]
Web page Image	a_web_xx.tar.gz

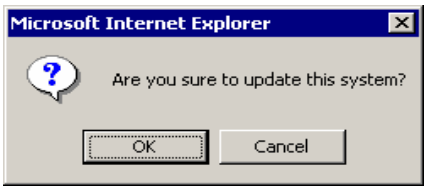
✓ You can download the latest version of firmware files in download menu of Seyeon Tech Website (www.flexwatch.co.kr, www.seyeon.co.kr).

5. Reboot the system after Update is finished.

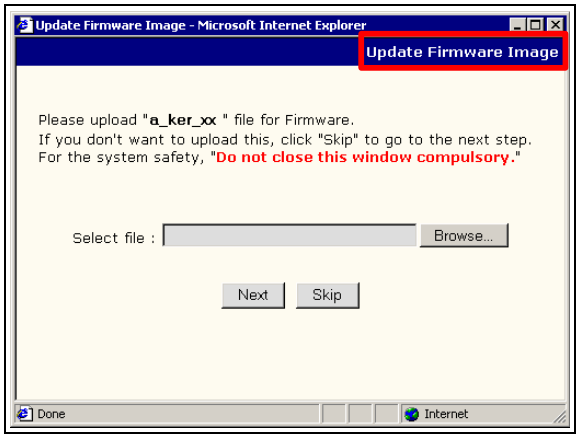
7.4.1. All(Kernel, RAM disk, System, Web) Update

1. When you click Start button in All (Firmware, RAM disk, System, Web) Update, you will be asked if you want to keep Update.



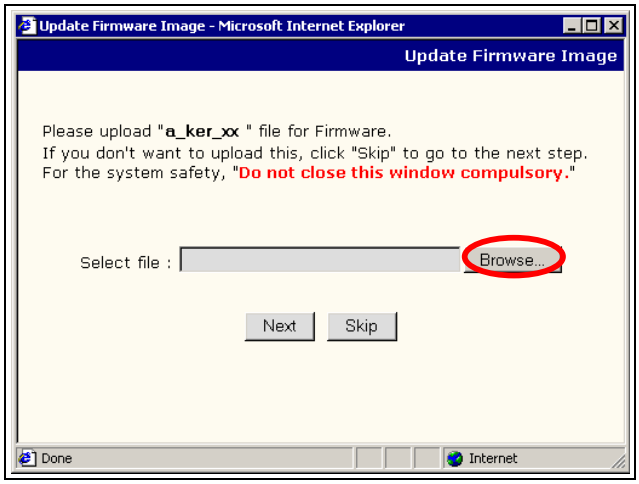


2. You will get a pop-up window where you need to select the firmware image file located in your PC.

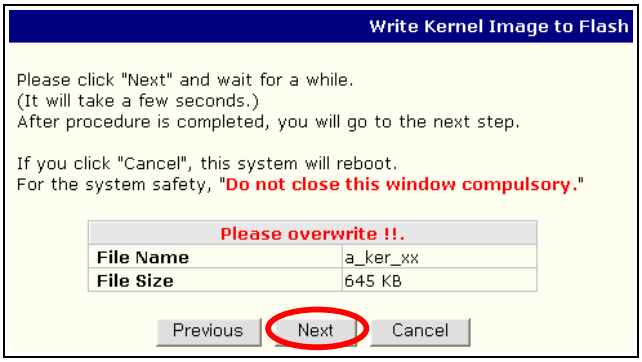

Update Firmware Image - Microsoft Internet Explorer
Update Firmware Image
Please upload "a_ker_xx " file for Firmware.
If you don't want to upload this, click "Skip" to go to the next step.
For the system safety, "Do not close this window compulsory."
Select file :
Browse...
Next
Skip
Done
Internet

> *If user's PC has pop-up block function, above window may not be popped up. Thus, please do not use pop-up block function when you do system update in Web page.*

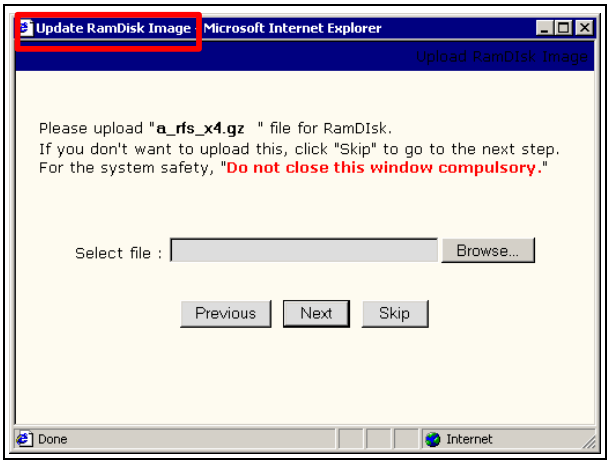
3. By Clicking "Browse" button, you can find the firmware image file in your PC.


Update Firmware Image - Microsoft Internet Explorer
Update Firmware Image
Please upload "a_ker_xx " file for Firmware.
If you don't want to upload this, click "Skip" to go to the next step.
For the system safety, "Do not close this window compulsory."
Select file :
Browse...
Next
Skip
Done
Internet

4. To update with selected file, please click “Next” button. Otherwise, click “Skip” to skip the current file update.
5. If you click “Next” button, you can check File Name & File Size.


Write Kernel Image to Flash
Please click "Next" and wait for a while.
(It will take a few seconds.)
After procedure is completed, you will go to the next step.
If you click "Cancel", this system will reboot.
For the system safety, "Do not close this window compulsory."
Please overwrite !!.
File Name
a_ker_xx
File Size
645 KB
Previous
Next
Cancel

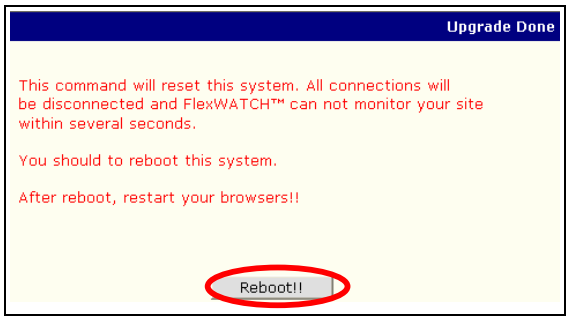
6. If you click “Previous”, you can go to step 2. If you click “Next”, then new firmware will be uploaded to FlexWATCH server. “Cancel” button will stop the Update procedure.
7. Next stage, you can update RAM Disk Image.


Update RamDisk Image - Microsoft Internet Explorer
Upload RamDisk Image
Please upload "a_rfs_x4.gz " file for RamDIsk.
If you don't want to upload this, click "Skip" to go to the next step.
For the system safety, "Do not close this window compulsory."
Select file :
Browse...
Previous
Next
Skip
Done
Internet

8. The update procedure is the same as step 2~step 5.
9. Next Stage will be update of System Image & Web page. This update procedure is also same

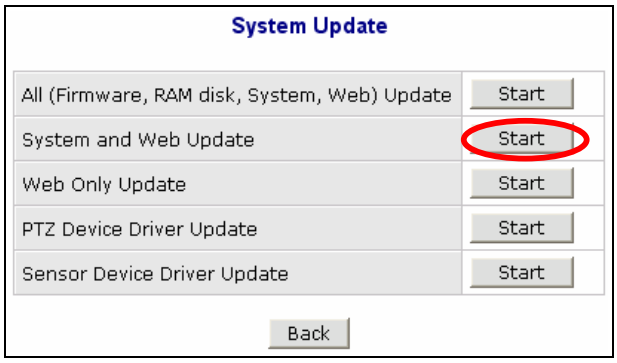
as step 2~step

10. After all update procedure is done, you will see a “Reboot” window. Please click Reboot button to reboot the system.


Upgrade Done
This command will reset this system. All connections will be disconnected and FlexWATCH™ can not monitor your site within several seconds.
You should to reboot this system.
After reboot, restart your browsers!!
Reboot!!

7.4.2. System and Web Update

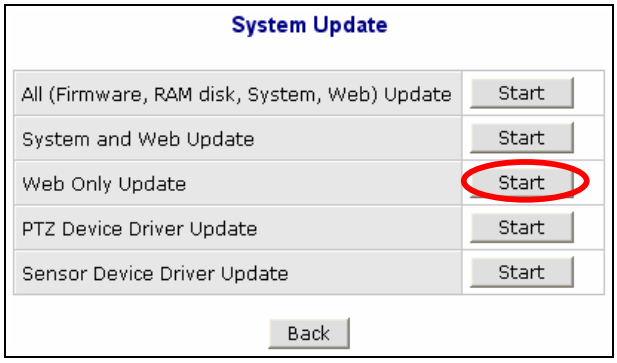
1. When you click Start button in System and Web Update, you will be asked if you want to keep Update.



2. The rest of update procedure is the same as All Update procedure.
3. After all update procedure is done, Please click Reboot button to reboot the system.

7.4.3. Web Only Update

1. When you click Start button in Web Only Update, you will be asked if you want to keep Update.



2. The rest of update procedure is the same as All Update procedure.